

ARN II Program Final Technical Report

Contract: SP0103-02-D0016 Delivery Orders: 0003, 0006, 0007, and 0008



Prepared for:

Apparel Research Network Program
Defense Logistics Agency
DSCP and HQ, Fort Belvoir, VA

Prepared by:

Product Data Integration Technologies, DBA Modulant



444 West Ocean Blvd, Suite 620 Long Beach, California 90802 (562) 495-6500

May 26, 2004

Approved for Public Release
Distribution Unlimited

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of

Management and Budget, Paperwork Reduction Pro				
1. AGENCY USE ONLY (Leave	2. REPORT DATE	3. REPORT TYPE AND		
blank)	26 MAY 2004	Final Technical Re	port (3/20/200	3 – 5/31/2004)
4. TITLE AND SUBTITLE			5. FUNDING N	
ARN Program			Contract SPC	0103-02-D0016
PDIT Final Technical Report				
			1	
6. AUTHOR(S)				
Michael H. O'Connell				
7. PERFORMING ORGANIZATION NA	ME(S) AND ADDRESS(ES)		8. PERFORMIN	G ORGANIZATION
7. PENI ONIMINA ONAANIEATION NA	IIIL(O) AND ADDITION(LO)		REPORT NU	
Product Data Integration				
Technologies, Inc. dba Modular	nt			
444 W Ocean Blvd, Suite 620				
Long Beach, CA 90802				
Zong Zodon, or roots				
9. SPONSORING / MONITORING AG	ENCY NAME(S) AND ADDRES	SS(ES)	10. SPONSORI	NG / MONITORING
			AGENCY R	EPORT NUMBER
Apparel Research Network Pro	gram			
HQ, Defense Logistics Agency				
Fort Belvoir, VA				
11. SUPPLEMENTARY NOTES				
12a, DISTRIBUTION / AVAILABILITY	STATEMENT			12b. DISTRIBUTION CODE
Tau Dio Tilibo Tio Ti At Alana Tai Ti		LITION OTATELE		
		UTION STATEME		
1	Approv	ed for Public Relea	is e	
	Dist	ribution Unlimited		
13. ABSTRACT (Maximum 200 Word	g)			L
10. ADDITIAOT (Maximum 200 Word	-,			
The DLA and DSCP sponsored	Apparel Research Netwo	ork (ARN) program's prin	nary goals are	to reduce total supply chain
costs and inventory levels while	minimizing retail shortage	es. The foundation for t	he achievemer	nt of these goals is the
existence of a web accessible of	latabase that provides total	al supply chain asset vis	ibility to all fun	ctions that make decisions
or consume apparel items. PD	T's ARN assignments we	ere to create the web acc	essible databa	se create decision support
tools that utilize this database,	and develop tools for use	by apparel manufacture	rs and hill and	hold contractors that
capture the data needed to fill v	roide in the total supply ch	ain asset visibility nictur	PDIT initiate	d three key projects to
address these assignments. Th	ARN Accet Vicibility Cu	stom database (AAVS D	ataMart) was	developed to create the
central repository for total supp	wohain accet visibility M	IM (Virtual Itam Managa	r) was created	to provide visibility and
decision support tools. VIM-AS	AD (ADN Cupply shain A	itomated Processing) we	e developed to	n support apparel
manufacturers and bill and hold	AF (AFIN Supply-Cliain Au	ng order and chipment of	tatue data noo	ded to make more informed
manufacturers and bill and hold	contractors write capturi	ng order and shipment s	iaius uaia nee	ded to make more implified

15. NUMBER OF PAGES 14. SUBJECT TERMS 200 Data Warehouse, Apparel, Supply Chain Management, Asset Visibility, 16. PRICE CODE Wholesale Inventory Reduction, Internet, Bill and Hold Contractors 20. LIMITATION OF ABSTRACT 19. SECURITY CLASSIFICATION 17. SECURITY CLASSIFICATION 18. SECURITY CLASSIFICATION OF THIS PAGE **OF ABSTRACT** OF REPORT None **UNCLASSIFIED UNCLASSIFIED** UNCLASSIFIED

decisions.



DEFENSE LOGISTICS AGENCY HEADQUARTERS

8725 John Kingman Road, STE 2533 Fort Belvoir, VA 22060-6221

REFER TO: J-339

November 18, 2004

MEMORANDUM FOR DEFENSE TECHNICAL INFORMATION CENTER ATTN: DTIC-OCA, PAT MAWBY

SUBJECT: DLA Final Technical Report

Attached is a CD of the ARN II Program Final Technical Report, dates covered (3/20/2003-5/31/2004) Delivery Orders: 0003, 0006, 0007, and 0008, Contract No. SP0103-02-D-0016. Report prepared by Product Data Integration Technologies, DBA Moeulant, May 26, 2004. Security classification of this report is unclassified with no restrictions.

Please call Joyce Clark at 767-1412 or the undersigned at 767-1413 if you have any questions.

JULIE T. TSAO

Contracting Officer's
Technical Representative

Attachment



Table of Contents

	eface	
Exe	ecutive Summary	2
Int	troduction	4
1	ARN System Architecture	6
	1.1 Operational Architecture	6
	1.2 Computer System Infrastructure	9
2	AAVS DataMart	12
	2.1 Wholesale Data Sources	12
	2.2 Manufacturing Data Sources	14
	2.3 Retail Data Sources	15
	2.4 Associated Data Sources	
	2.5 Users and Menus	19
	2.6 AAVS DataMart Data Quality and Reliability	20
3	AAVS DataMart Extractions	21
	3.1 VIM Functions Developed and Managed by ATI	
	3.2 Access via AAVS ftp Site	
4	System Components	22
	4.1 VIM-ASAP	22
	4.2 VIM – Virtual Item Manager	
5	Accomplishments During This Contract Period	44
	5.1 Develop and Support the AAVS DataMart	44
	5.2 Manufacturer Support	
	5.3 Develop and Support VIM Functions	48
	5.4 Training Support	48
	5.5 Project Management	
	5.6 Other RDCs (D.O. 0006)	49
6	Conclusions	51



List of Figures

Figure 2 – ARN Operational Scenario	Figure 1 – Total Supply Chain Flow of Product, Orders, and Data	2
Figure 3 – ARN Pyramid		
Figure 4 – Computer System Components	Figure 3 – ARN Pyramid	9
Figure 5 – SAMMS Extraction for the AAVS DataMart	Figure 4 – Computer System Components	10
Figure 6 – VIM-ASAP User Login Web Page	Figure 5 – SAMMS Extraction for the AAVS DataMart	12
Figure 7 – Administrative Functions Supported By VIM-ASAP		
Figure 8 – Manufacturing Functions Supported By VIM-ASAP	Figure 7 – Administrative Functions Supported By VIM-ASAP	23
Figure 9 – Bill and Hold Depot Functions Supported By VIM-ASAP	Figure 8 – Manufacturing Functions Supported By VIM-ASAP	23
Figure 10 – Report Functions Supported By VIM-ASAP		
Figure 11 – Traditional Manufacturing Processes Affected by VIM-ASAP		
Figure 12 – Manufacturing Processes Using VIM-ASAP		
Figure 13 – Bill and Hold Contractor's Depot Processes Affected by VIM-ASAP	Figure 12 – Manufacturing Processes Using VIM-ASAP	25
Figure 14 – Bill and Hold Contractor's Depot Processes Using VIM-ASAP	Figure 13 – Bill and Hold Contractor's Depot Processes Affected by VIM-ASAP	26
Figure 15 – Submit Data Change Request		
Figure 16 – Sample of Digital Contract (DD Form 1155)		
Figure 17 – View Contract Shipments and Invoices		
Figure 18 – Invoice Preparation (DD Form 250)		
Figure 19 – Paper Invoice and Related Container Labels.31Figure 20 – Selection of Requisitions for Processing.31Figure 21 – Paper MROs (DD Form 1348-1A).32Figure 22 – Shipping Label per MIL-STD-129P.32Figure 23 – DSCP Inventory Records for Each Bill and Hold Contractor.33Figure 24 – Update User Profile Web Page.38Figure 25 – Edit Menu Membership Web Page.39Figure 26 – Resolve Contract Data Change Request Web Page.39Figure 27 – Resolve NSN Data Change Request Web Page.40Figure 28 – Submit ACF Data Changes to SAMMS Web Page.40Figure 29 – Submit NSN Data Changes to SAMMS Web Page.41Figure 30 – Sample View Consumption Based Tariffs.42		
Figure 20 - Selection of Requisitions for Processing31Figure 21 - Paper MROs (DD Form 1348-1A)32Figure 22 - Shipping Label per MIL-STD-129P32Figure 23 - DSCP Inventory Records for Each Bill and Hold Contractor33Figure 24 - Update User Profile Web Page38Figure 25 - Edit Menu Membership Web Page39Figure 26 - Resolve Contract Data Change Request Web Page39Figure 27 - Resolve NSN Data Change Request Web Page40Figure 28 - Submit ACF Data Changes to SAMMS Web Page40Figure 29 - Submit NSN Data Changes to SAMMS Web Page41Figure 30 - Sample View Consumption Based Tariffs42		
Figure 22 – Shipping Label per MIL-STD-129P		
Figure 22 – Shipping Label per MIL-STD-129P	Figure 21 – Paper MROs (DD Form 1348-1A)	32
Figure 23 – DSCP Inventory Records for Each Bill and Hold Contractor33Figure 24 – Update User Profile Web Page38Figure 25 – Edit Menu Membership Web Page39Figure 26 – Resolve Contract Data Change Request Web Page39Figure 27 – Resolve NSN Data Change Request Web Page40Figure 28 – Submit ACF Data Changes to SAMMS Web Page40Figure 29 – Submit NSN Data Changes to SAMMS Web Page41Figure 30 – Sample View Consumption Based Tariffs42	Figure 22 – Shipping Label per MIL-STD-129P	32
Figure 24 – Update User Profile Web Page38Figure 25 – Edit Menu Membership Web Page39Figure 26 – Resolve Contract Data Change Request Web Page39Figure 27 – Resolve NSN Data Change Request Web Page40Figure 28 – Submit ACF Data Changes to SAMMS Web Page40Figure 29 – Submit NSN Data Changes to SAMMS Web Page41Figure 30 – Sample View Consumption Based Tariffs42		
Figure 26 – Resolve Contract Data Change Request Web Page		
Figure 26 – Resolve Contract Data Change Request Web Page	Figure 25 – Edit Menu Membership Web Page	39
Figure 27 – Resolve NSN Data Change Request Web Page		
Figure 28 – Submit ACF Data Changes to SAMMS Web Page		
Figure 29 – Submit NSN Data Changes to SAMMS Web Page		
Figure 30 – Sample View Consumption Based Tariffs42		



List of Tables

Table 1 – AAVS DataMart Data Sources	8
Table 2 – ARN Network Devices	
Table 3 – Manually Created Table for DFAS Codes and Addresses	
Table 4 – User and Menu Data Tables	
Table 5 – AAVS FTP Sites and Content of Files	
Table 6 – VIM Functions, Status, and Development Responsibility	33

Appendices

- A Acronyms
- B ARN Development Environment Upgrade Evaluation
- C VIM-ASAP v2.0 Users Manual
- D VIM-ASAP Overview
- E MILSTRIP and MILSTRAP Usage Rules
- F MILSTRIP and MILSTRAP Formats
- G VIM-ASAP Implementation Status
- H ARN Security Analysis and Testing
- I VIM-ASAP Data Exporting



Preface

This Final Technical Report covers all the work done on contract SP0103-02-D-0016, Delivery Orders 0003 (OCIE), 0006 (VIM-ASAP Data Exchange), 0007 (BSM), and 0008 (All Other Tasks). The work was performed beginning on March 20, 2003 and was completed on March 31, 2003 (plus a two month extension to complete the implementation support on four of the tasks). This report is built upon the foundation of all previous ARN work so that a complete picture can be presented of how the tasks performed during the past year relate to the entire ARN system.



Executive Summary

The DLA (Defense Logistics Agency) and DSCP (Defense Supply Center Philadelphia) sponsored ARN (Apparel Research Network) program's primary goals are to reduce total supply chain costs and inventory levels while minimizing retail shortages. The foundation for the achievement of these goals is the existence of a web accessible database that provides total supply chain asset visibility to all functions that make decisions or consumes apparel items (see Figure 1). Modulant's ARN assignments were to create the web accessible database, create decision support tools that utilize this database, and develop tools for use by apparel and textile manufacturers and bill and hold contractors that capture the data needed to fill voids in the total supply chain asset visibility picture. Modulant initiated three key projects to address these assignments. The ARN Asset Visibility System database (AAVS DataMart) was developed to create the central repository for total supply chain asset visibility. VIM (Virtual Item Manager) was created to provide visibility and decision support tools. VIM-ASAP (ARN Supply-chain Automated Processing) was developed to support apparel and textile manufacturers and bill and hold contractors. All of these efforts were focused on providing total supply chain visibility to help DLA and the military service's personnel make more informed decisions.

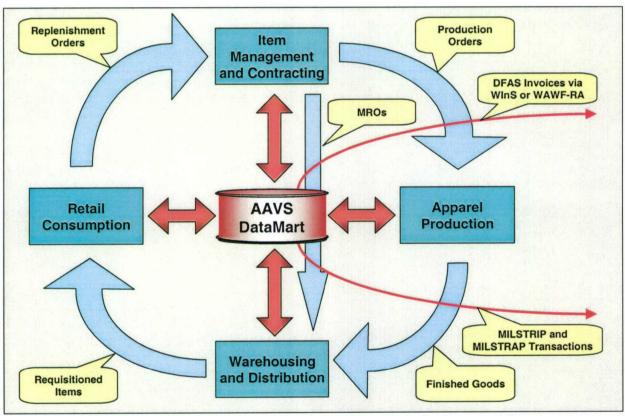


Figure 1 – Total Supply Chain Flow of Product, Orders, and Data

The AAVS DataMart is an integrated collection of data from a variety of legacy and ARN developed systems. The legacy system data provides part of the total supply chain data, e.g., contracts, requisitions, depot inventory levels, payment responsibilities, administrative offices, requisitions, and manufacturing, retail, and wholesale addresses. The ARN developed systems provide the rest of the data about the total supply chain, e.g., bill and hold contractor shipments,



retail consumption patterns, and production status. The current version of the AAVS DataMart contains apparel and textile items for all military services and data related to those items, e.g., retail addresses that received shipments. Completeness of data and consistency between sources of data was a significant problem that was addressed with Modulant developed screening and DSCP C&T controlled update software.

VIM is a collection of web accessible tools that utilize data from the AAVS DataMart to provide visibility and decision support. Current VIM tools provide views of retail assets, manufacturing production status, warehouse inventory levels at specific depots, tracking status for shipments, contract production and shipment status, SAMMS data quality corrections, and hyperlinks to a series of other ARN developed functions.

VIM-ASAP is a web accessible tool that is used by defense apparel and textile manufacturers and bill and hold contractors to record production status, create invoices and shipping documents, track payment status from DFAS, operate a depot, and generate all appropriate electronic transactions to complete the picture of the total supply chain. VIM-ASAP performs all of these functions by accessing contract, requisition, and product data to present each contractor with only their own specific subset of the information that they are responsible for. It facilitates the capture of the shipment data by utilizing the AAVS DataMart data to capture the information needed to complete a all required DoD forms and transactions. This reduces the time it takes each manufacturer to prepare their documents and improves the quality and completeness of each document and transaction.

The results of these efforts can be seen in the significant inventory reductions that have been seen at the Marine Corps Recruit Training Centers (RTC), the improvements at the Army CIIPs (Clothing Initial Inventory Points), in the growth of the use of VIM-ASAP to capture production status and shipment data for DSCP C&T, in improved manufacturer's cash flow, and in a reduction in the manufacturer's efforts required to complete forms and update systems. The results can also be seen in the timeliness and accuracy of all the electronic transactions and resultant inventory data.



Introduction

This report provides a summary of the work done by Modulant for the ARN program for Contract SP0103-02-D-0016. All other documents produced for this contract, both CDRL and non-CDRL (Contract Data Requirement List), are provided as appendices to this report. The monthly status and financial reports were delivered each month and therefore are not included as attachments to this report. The primary objective for Modulant's work on this contract was to build a single complete supply chain database from a collection of heterogeneous legacy system databases and to make this data available over the Internet for anyone with an interest in some facet of the total supply chain. The visibility into the total supply chain provides the information required to make decisions that can both reduce inventory levels and shortages. The work that Modulant has done to achieve this objective is explained in the following six sections:

- 1. The first section identifies the ARN System Architecture using both operational and computer system architectures.
- 2. The second section identifies the structure and content of the AAVS DataMart, the legacy systems that provide the data, and the ftp sites that provide data to other ARN systems.
- 3. The third section identifies the extractions from the AAVS DataMart for a variety of ARN related applications.
- 4. The fourth section identifies the VIM-ASAP and VIM function that were developed by Modulant for the ARN program.
- 5. The fifth section identifies the specific tasks that were performed on this contract.
- 6. The sixth and final section provides summary level conclusions for this report.

The primary goal for the past year was to expand the capabilities and the recognized success of manufacturers' use of VIM-ASAP and DSCP C&T's use of VIM. The primary tasks performed during the past year, include:

- 1. We worked with the BSM team for DSCP C&T to implement the conversion from SAMMS to BSM for BDU items.
- 2. We accessed additional sources of data to add a UPC to each container label and to utilize FEDLOG data for each NSN's nomenclature and size.
- 3. We implemented the use of the new packaging standard (MIL-STD-129P) for shipping and carton labels.
- 4. We worked with DSCP C&T and HQ DLA to comply with their security requirements. We tested the adequacy of our security measures by having an outside expert try and fail to hack into the ARN servers.
- 5. We started sending automatic email notices to each DSCP C&T Item Manager whenever a DD250 is shipped. We also provided all contracting personnel with a VIM function that



they can use to identify contracts that they want to be notified about whenever a shipment occurs. We also expanded VIM so that DSCP personnel could have access to each manufacturer's DD1155s, DD250s, and contract status.

- 6. We modified the WAWF-RA interface software to conform to their new version.
- 7. We completed a study of the best practices that we can use to convert all ARN web software from ASP to .NET code.
- 8. We performed a study of the data availability and utilization of OCIE data (from SARSS and CIF-ISM).
- 9. We created a VIM menu editing function to facilitate PDIT's and AdvanTech's editing of the VIM menus.
- 10. We initiated a study of DSCR's data to understand what needed to be done so that DSCR's manufacturers could use VIM-ASAP.
- 11. We prepared a CD-ROM movie that demonstrates the use of VIM-ASAP.
- 12. We created a mechanism that permits VIM-ASAP users from larger companies to have access to contract, DD250, and MROs via an XML data export function.
- 13. VIM-ASAP was expanded to support textile companies that produce GFM under contract to DSCP C&T and manufacturers that produce chemical protective gear.



1 ARN System Architecture

The ARN System Architecture can be viewed from either an operational or computer system infrastructure perspective. The operational architecture identifies each of the total supply chain functions, how they relate to each other, and what automated support systems they use. The computer system architecture identifies all the computer and communications related equipment and interfaces.

1.1 Operational Architecture

The ARN SCS (Supply Chain System) Operational Architecture is depicted in Figure 2. The processing steps show the interrelationships of the wholesale, wholesale local, and manufacturing segments of the C&T (Clothing & Textile) supply chain and the ARN and related systems that support this process. Solid blue lines are used to indicate material or document flow. Dashed red lines are used to indicate the flow of data.

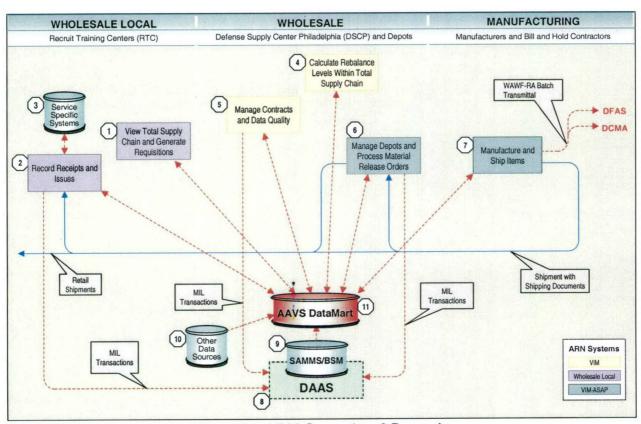


Figure 2 - ARN Operational Scenario

Processing steps and data sources are identified by the numbers in white octagons of Figure 2 and are described as follows:

 View Total Supply Chain and Generate Requisitions: Wholesale local personnel utilize the local inventory management and control system to initiate system functions and begin the daily supply cycle. They may set or change the system's inventory management parameters. Among these is the Annual Shipping Plan, which represents the budgeted numbers of recruits



- beginning their training each week, and is entered into the system as soon as it is received. Among the many other parameters that may be set are prices, option to order unit pack or exact number of each item, source of supply, and review of Reorder Objectives. Reorder Objectives represent the Safety Level Days, Reorder Point Days and Reorder Quantity Days.
- 2. Record Receipts and Issues: Calculate Inventory Levels and Generate Suggested Order List: The Predictive Forecasting Module is initiated to establish the relationship between the predicted number of recruits and the reorder levels. The system will generate the revised reorder levels (Safety Stock, Reorder Point and Reorder Quantity) for each active item based on three variables. The first variable is the average daily usage per item. The second variable is the "Recruit Load Factor" which represents the increase or decrease of Recruit Activity over the average annual weekly activity for weeks T+2 through T+6. The final variables are the Reorder Objectives. The operator executes the program to compile a list of those items that need to be ordered. After compiling the list, the system will then display the items it recommends should be ordered. The operator then has the ability to add new items to the list, delete items from the list or change the suggested order quantity. The local retail system performs the usual supply functions of requisition processing, receiving, and issuing stock; cash sales, quality deficiency reporting, inventory adjustments, credits, warehouse denials, and physical inventory. The end of day close outs closes activity each day and prepares system for the next day's activity. Requisitions are processed into either a DSCP Requisition or a Local Purchase Order. The system extracts all MILSTRIP (Military Standard Requisitioning and Issue Procedures) transactions generated during the current day's activity for upload into MUMMS (Marine Corps Unified Material Management System) or other legacy system. The system then extracts the daily activity currently required by AAVS DataMart. The data is separated into four tables. They are: Item Master which stores the summary of the activity by item; Daily Issues which contains all the issues for the day; Daily Receipts which contains all receipts entered for the day; and, Open Requisitions which contains all open DSCP Requisitions and Local Purchase Orders. Supply and financial transactions are transmitted each day in MILSTRIP format as required by MUMMS (USMC) and other services legacy systems
- 3. <u>Service Specific Systems</u>: Issues are recorded using each of the service's systems. Each day's data is collected and sent to the AAVS DataMart.
- 4. <u>Direct Redistribution and Delivery Destinations</u>: The DSCP Item Manager looks across the total supply chain to analyze demand, consumption, and stock locations to decide where and how much material should be positioned at the various retail and wholesale sites. The combination of balancing the supply chain and the analysis of retail demand and locations is used to develop recommendations to the DSCP Item Manager for delivery orders and material replenishment orders that directs the production and redistribution of materials. The Item Manager is responsible for setting a variety of parameters that guide the decisions made by the system, including parameters such as order of depot preferences for filling retail requisitions.
- 5. Manage Contracts and Data Quality: DSCP C&T Item Managers and contracting officers utilize VIM to monitor shipments for all contracts, view selected DD250s, track shipment



- status as recorded by the carrier, view DD1155s from data extracted from SAMMS/BSM, and to disposition data quality issues that were raised by any of the manufacturers.
- 6. Manage Depots and Process Material Release Orders: There are two types of depots. The first is the DLA operated depots that use their own legacy systems to perform all their functions, including generating updates to SAMMS/BSM. The ARN systems do not impact these depots directly. All interaction with these depots is done through the Distribution Standard System (DSS). The second type of depot is operated by bill and hold contractors who use VIM-ASAP to manage their inventories, receive and process requisitions, generate all the required shipping documents and MRO (Material Release Order) forms, track carrier shipment status, and format and transmit all MILSTRIP and MILSTRAP transactions.
- 7. Manufacture and Ship Items: The ARN system called VIM-ASAP supports clothing and textile manufacturers with functions that provide access to digital contracts, supports the recording of production status, generates all invoices and shipping documentation, formats and transmits digital invoices to DFAS, tracks DFAS payments for each CLIN (Contract Line Item Number) in every invoice, supports data quality problem notifications for DSCP, tracks contract versus shipment status, and provides access to carrier tracking information for each shipment.
- 8. <u>SAMMS/BSM</u>: The source for much of the AAVS DataMart data is extracted from SAMMS and BSM. SAMMS and BSM contain a wide range of data, including retail requisitions, manufacturer's contracts, and depot inventory levels for all NSNs (National Stock Number). SAMMS and BSM are updated by a variety of ARN systems using MILSTRIP or MILSTRAP transactions.
- 9. Other Data Sources: The other data provides manufacturer's names and addresses, DFAS (Defense Finance and Accounting System) billing addresses, depot identifications, DFAS payment status, NSN to UPC correlations, and a wide variety of related data.
- 10. <u>AAVS DataMart</u>: The AAVS DataMart provides total asset visibility for all retail, wholesale, and manufacturing activities. At the retail level it tracks consumption, demand, and on-hand inventory levels. At the wholesale level it tracks depot supplies and requisitions by location. At the manufacturing level it tracks contracts, production status, and shipments.

The ARN architecture can also be viewed as a pyramid chart (see Figure 3). The chart shows that all ARN functions are accessible as part of VIM and work with only data from the AAVS DataMart. The chart also shows the AAVS sources of data (see Table 1).

Table 1 - AAVS DataMart Data Sources

Data Sources	
CAGE	Provides manufacturers' address and business categories
CAS	Correlates SAMMS admin office codes with DCMA addresses
DFAS	Payment status for DD 250s
DODAAC	Provides addresses, port identifiers, and bulk break points
FEDLOG	Correlates NSN with sizes and freight classifications



Data Sources	
IRM	Captures issues at Army and Marine Corps RTCs
PAY OFC	Correlates SAMMS pay codes with DFAS addresses
RIC	Correlates depot identifiers with their DODAAC
SAMMS/BSM	Contracts, requisitions, and depot inventories
Services-R	Retail systems used by various services (e.g., Army)
UPC	Provides NSN to UPC Correlation
3D Scan	Determines sizes from 3D body scan

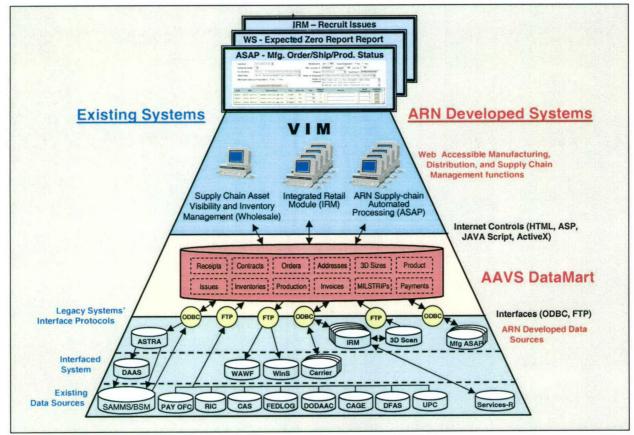


Figure 3 - ARN Pyramid

1.2 Computer System Infrastructure

ARN's production system (see Figure 4) is supported by a fully redundant configuration of servers and communications devices built upon the foundation of battery backups to protect against power failures. An ARN router and firewall handle the network communications with mutual fail-over support from identical Modulant equipment on their own network. The major components of the ARN production network are shown in Table 2.



Table 2 - ARN Network Devices

Device	Notes
Dual Dell 1650 Web Servers	The web server contains three web sites and all the related HTML and ASP pages. Two are accessible without passwords (http://info.ct-dscp.com and http://arn2.com). One is only accessible using encrypted user IDs and passwords (http://vim.ct-dscp.com).
Dual Dell 2550 Database Servers	The database server contains all the SQL 2000 software and controls all database access. The database server cannot be addressed externally, but only through the web server. This prevents hackers from even being able to understand that the database server even exists, which means that it is impossible for hackers to access the database server.
RAID	A RAID (Redundant Array of Independent Disks) device has totally redundant circuits and disk drives. All data is updated at two physical locations as a mirror image on two separate drives. Dual transaction logs for each change are also kept on two drives.
PIX 515E Firewall	The firewall provides protection from unauthorized access as well as control over a network's VPN (Virtual Private Network).
CISCO 2621 Router	The router manages the network and routes all inter-server communications.
ISP (T1)	ARN's Internet Service Provider is Sprint

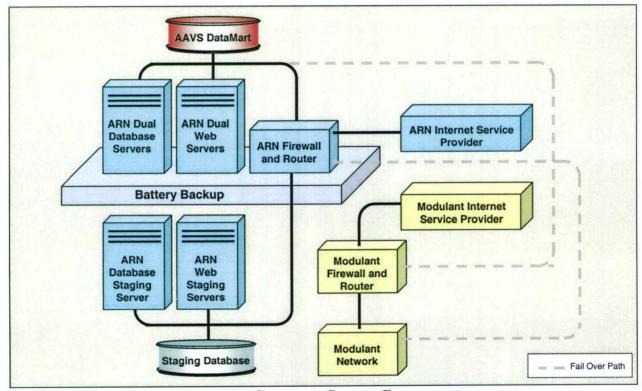


Figure 4 - Computer System Components

The ARN network also contains staging web and database servers that are configured just like the production server for final testing prior to moving software to production. The staging computers will be accessible and can be update by both AdvanTech and Modulant personnel for system testing prior to updating production. The production server will only be able to be



updated by a single individual while physically at the production server. This is being done for security and configuration management purposes. Requiring that the update be done from the console on the production server provides an extra layer of security. The single individual doing the updates for production will follow a specific procedure that guarantees that the right approvals have been obtained and that an archive is properly maintained of all changes.

There are also two development servers with the functions split just like the production servers. All of the programmers have full access to this equipment to develop and test the functions that they are responsible for. MS SourceSafe is being used to manage all software from the start of development through maintenance of the code while in production. All servers utilize Windows 2000 for their operating system. The database software for both the production and development servers is Microsoft SQL Server 2000. VeriSign provides the encryption protection software.



2 AAVS DataMart

The ARN Asset Visibility System (AAVS) DataMart is built from a collection of five classes of data sources. This collection of information provides for visibility into the total apparel supply chain. The type of data collected from each legacy system is as follows:

- Wholesale: The sole source of wholesale data is a DLA system called SAMMS.
 Wholesale data addresses product identification, contracts, requisitions, and depot inventory quantities and locations.
- 2) **Manufacturing**: The sole source of manufacturing data is an ARN developed system called VIM-ASAP. Manufacturing data addresses delivery order queues, requisitions, production status, shipments, and various types of military transactions, e.g., MILSTRIP.
- 3) **Retail**: Retail data is collected from Marine Corps and Army recruit training centers as well as from non-recruit sources. Retail data addresses consumption and receipts.
- 4) **Associated Data**: Associated data is collected from a variety of web sites and CD-ROMs that provides data required to complete some of the processing, e.g., shipping addresses, billing addresses, code translations, etc.
- 5) Users and Menus: A series of related tables is used to identify users, user groups, user ownerships, and menu functions and organization.

2.1 Wholesale Data Sources

The item managers and contracting officers at the DSCP manage their inventories, requisitions, and contracts using SAMMS and BSM (see Figure 5). DSCP in Philadelphia runs a nightly batch update to create two Oracle databases for only clothing and textile (C&T) items. One is called the C&T Data Warehouse and the other is called the DSD (Decision Support Database). Modulant in Long Beach initiates a nightly batch extraction from both Oracle databases to create a Microsoft SQL Server 2000 database called the AAVS DataMart. The extraction program runs automatically each night looking to see if any of the SAMMS/BSM tables are updated. Once an update to any table is detected, it is downloaded to partially replace the data in the AAVS DataMart. The data is only partially replaced to protect against periodic data problems with the Oracle databases. The partial replacement is focused on ensuring that records are not deleted from the AAVS DataMart until seven days after they were deleted from SAMMS/BSM. This is done to protect against inadvertent deletions or partial downloads where some data is missing.

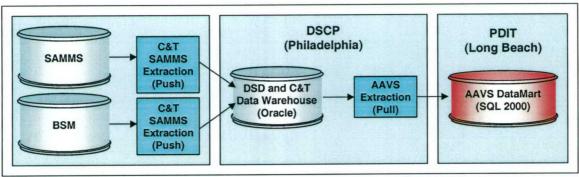


Figure 5 - SAMMS Extraction for the AAVS DataMart



The data extracted from SAMMS is done from a series of related tables. The data is screened so that only active products, contracts, and requisitions are loaded into the AAVS DataMart. The SAMMS tables from the C&T Data Warehouse, include:

- ACF: The Active Contracts File table contains contracting data for currently active contracts for each of the apparel manufacturers, e.g., contract number, NSN, order quantity, ship-to locations, CAS code, payment office code, etc.
- o ARCS1: The Active Requisition Control/Status table 1 contains retail requisition data, e.g., requisition number, requestor identification, NSN, order quantity, etc.
- o ARCS2: The Active Requisition Control/Status table 2 contains current requisition status information for each suffix code, e.g., requisition number, status code, status date, etc.
- o ARCS3: The Active Requisition Control/Status table 3 contains requisition status information once the requisition is assigned to be filled by a specific depot, e.g., depot responsible for filling order, denial code, hold code, etc.
- o ARCS4: The Active Requisition Control/Status table 4 contains shipment data for each requisition, e.g., transportation control number, mode of shipment, shipment date, etc.
- o **DUE**: The Due-In table contains due-in information for shipments from depots to retail, e.g., requisition number, depot, order quantity, ship date, etc.
- NIR: The National Inventory Record table contains NSN identification data, e.g., PGC, NSN, service(s) that use the garment, total on-hand issuable quantities, responsible item manager identification, etc.
- o NIR2: The National Inventory Record table 2 contains inventory level data for each depot, e.g., NSN, depot identification, depot inventory level, etc.
- o **ORCS**: The Output Routing Codes table contains DSCP Item Manager identification, name, and phone number.
- o **REDF**: The Requisition Exception Data File table contains exception data, e.g., in-the-clear address to be used in place of ship to DODAAC address.
- o SCF: The Supply Control File table contains information about each NSN, e.g., nomenclature, size, consumption history, etc.
- VCSF: The Violation Control and Suspense File table contains requisition related data, such as follow-up inquiries and various types of violations. The data is stored as 80 column MILSTRIP transactions along with various dates and codes.

The SAMMS tables from the DSD, include:

o **ItmHist**: The Item History File table contains all of the MILSTRIP and MILSTRAP transactions that change inventory levels.

The AAVS Extraction program accesses only a subset of the SAMMS data from the identified tables for insertion into the AAVS DataMart. The data screening rules used to extract the data include:

o All NSNs that are marked as used by any of the military services in the NIR table



- o The subset of the above that have a valid PGC in the SCF table
- All contracts in the ACF table that call for any of the above NSNs plus all contracts for special measurement NSNs that are being produced by any of the VIM-ASAP manufacturers
- o Any of those contracts that are not cancelled, closed, or inactive for more than one year
- o All requisitions in the ARCS tables that call for any of the above NSNs
- o All depot records in the NIR2 table for any of the above NSNs
- o All due-in records in the DUE table for any of the above NSNs

The AAVS DataMart contains a specific subset of the data elements that could be extracted from the SAMMS tables. The specific subset was selected based on the ARN's team knowledge of the use of the data. A list of all SAMMS data elements was circulated to the entire team so each team member could mark the ones they use. The SAMMS data is extracted from an Oracle extraction from SAMMS. The data is screened to only select a specific subset of data that complies with the following:

- o All NSNs that begin with an FSC (Federal Supply Class) of "83", "84", or "72".
- o Any NSNs that begin with an FSC of "99" whose nomenclature implies apparel
- o All of the above NSNs that are marked as used by any of the military services
- All of the above NSNs with non-zero entries in SSC (Standard Supply Code) except for those marked with an SSC of 2 or 6. Specific NSNs with an SSC of 6 are stored if the NSN is from the ARCS1 table and a valid NSN is substituted in the ARCS2 table.
- o All contracts that require any of the above NSNs
- o All requisitions that require any of the above NSNs
- o All depot counts for any of the above NSNs

The AAVS DataMart was expanded to capture data related to special measure orders for a number of manufacturers who needed the data for orders or for the preparation of their DD1155s (contracts) and DD250s (invoices). Special Measurement garments do not have conventional NSNs. They have special coded NSNs where specific characters have specific meaning. The coding is used to correlate special measurement garments with their nomenclature. VIM-ASAP also needed to be modified to handle the non-standard NSNs.

DLA is working to replace SAMMS with BSM. During the contract performance period, Modulant reviewed and commented upon BSM test data and then worked with a number of BSM teams from Accenture, DLA, and DSCP C&T as BSM was implemented on December 1, 2003for BDU items only. A great deal of time was spent during the final quarter of the contract year working to identify and then cope with the data problems created by BSM.

2.2 Manufacturing Data Sources

VIM-ASAP is a web-based system that is used by apparel manufacturers and bill and hold contractors to access contracts, report production status, generate invoices and shipping documents, generate requisitions and shipping documents, and all electronic transactions required to update SAMMS/BSM and DFAS. The following data is created or updated in the AAVS DataMart by VIM-ASAP:



- Cutting status for each CLIN of every contract
- o Contract invoicing/shipping status for each CLIN (shipment date, shipment number, invoice number, carrier tracking number, payments, etc.)
- o Requisition shipping status (shipment date, carrier, carrier tracking number, weight, volume, TCN (Transportation Control Number), mode of shipment, etc.)
- o Replies to follow-up inquiries
- o Manual requisitions from DSCP phoned or faxed orders
- o SAMMS update transactions to correct data quality problems
- MILSTRIP and MILSTRAP transactions for bill and hold contractor's inventory and shipping activities

2.3 Retail Data Sources

Retail data is collected to understand actual consumption, order ship time patterns, and recruit forecasts. In the past, consumption was calculated from retail requisitions processed at the wholesale level. This tended to skew the consumption data because orders were largely budget driven with large orders when funds were available and smaller orders when the budgets were tight. Today consumption is tracked using two methods. Army and Marine Corps recruit consumption is tracked at the point of issue when ownership is transferred from the DLA owned depot to the recruit's service. All other consumption is tracked from the SAMMS/BSM requisitions where each requisition is treated as replenishment. Non-recruit training locations do not carry large inventories and tend to place replenishment orders that are very close to actual consumption, especially when all of the orders are grouped into a twelve-month running average.

2.4 Associated Data Sources

A number of data sources were identified and pertinent data extracted to provide a complete AAVS DataMart source of data for use by all ARN applications. The following data sources were used to acquire the needed data:

2.4.1 CAGE/Manufacturers Identification

CAGE (Commercial And Government Entity code) data is acquired quarterly (CD-ROM for \$22.75) from the Defense Logistics Information Service, Freedom of Information Office, 74 Washington Avenue N., Battle Creek, MI 49017-3084. The data that is extracted from this CD-ROM includes:

- o CAGE
- o Company name
- o Number and street
- o City, State, and Zip with dash number
- Country
- o Phone and Fax number
- o Business size code
- o Business type code
- Woman owned code
- o Type of company



2.4.2 DFAS/Pay Office Codes

DFAS identifies their payment offices with a DODAAC and a mailing address that is slightly different than the address found in the DAAS (Defense Automated Addressing System)
DODAAC data. DSCP defines the payment office using the SAMMS ACF (Active Contracts File) table with a two character alphanumeric code "PAYMT_OFC_CD". No automated source exists that correlates the DFAS DODAAC with the SAMMS/BSM code. The combination of the lack of an automated correlation and the disjoint between the two DODAAC addresses necessitated the creation of a manual table (see Table 3) that was created by working with DFAS personnel to get accurate information for the DFAS addresses and the SAMMS/BSM code correlations. Most of the address data was extracted from DFAS's web site:

https://ecweb.dfas.mil/notes.html. DFAS accepts electronic payments using two formats, i.e., SAMMS and MOCAS (Mechanization of Contract Administration System). Pay Codes "12" and "16" identify SAMMS formatted invoices while nearly all other codes identify MOCAS invoices. The sole exception is pay code "SL" which is used to identify the BSM pay office.

Table 3 - Manually Created Table for DFAS Codes and Addresses

Pay Code	DODAAC	Name	Title	Address	City, State Zip
01	SC1020	DFAS Columbus Center	DFAS-CO-JSA/Southeast Division	P.O. Box 182225	Columbus, OH 43218-2225
09	SC1034	DFAS Columbus Center	DFAS-CO-JSC/Capitol Division	P.O. Box 182263	Columbus, OH 43218-2263
12	SC0100	DFAS Columbus Center	DFAS BVDPII CC	3990 East Broad St Bldg 21	Columbus, OH 43213-6248
16	SC0100	DFAS Columbus Center	DFAS BVDPII CC	3990 East Broad St Bldg 21	Columbus, OH 43213-6248
A1	SC1020	DFAS Columbus Center	DFAS-CO-JSA/Southeast Division	P.O. Box 182225	Columbus, OH 43218-2225
A2	SC1016	DFAS Columbus Center	DFAS-CO-JNB/Bunker Hill Division	P.O. Box 182077	Columbus, OH 43218-2077
A3	SC1028	DFAS Columbus Center	DFAS-CO-JWB/Gateway Division	P.O. Box 182317	Columbus, OH 43218-2317
A4	SC1018	DFAS Columbus Center	DFAS-CO-JNF/New Dominion Division	P.O. Box 182041	Columbus, OH 43218-2041
A5	SC1030	DFAS Columbus Center	DFAS-CO-JSD/Chesapeake Division	P.O. Box 182264	Columbus, OH 43218-2264
A7	SC1028	DFAS Columbus Center	DFAS-CO-JWB/Gateway Division	P.O. Box 182251	Columbus, OH 43218-2251
A8	SC1032	DFAS Columbus Center	DFAS-CO-JNC/Minuteman Division	P.O. Box 182266	Columbus, OH 43218-2266
A9	SC1018	DFAS Columbus Center	DFAS-CO/JNF New Dominion	P.O. Box 182317	Columbus, OH 43218-2317
В0	SC1028	DFAS Columbus Center	DFAS-CO-JWB/Gateway Division	P.O. Box 182251	Columbus, OH 43218-2251
B2	SC1032	DFAS Columbus Center	DFAS-CO-JNC/Minuteman Division	P.O. Box 182266	Columbus, OH 43218-2266
B7	SC1004	DFAS Columbus Center	DFAS-CO-JWV/Van Nuys Division	P.O. Box 182157	Columbus, OH 43218-2157
B8	SC1012	DFAS Columbus Center	DFAS-CO-JNA/Liberty Division	P.O. Box 182104	Columbus, OH 43218-2104
B9	SC1010	DFAS Columbus Center	DFAS-CO-JND/Independence Division	P.O. Box 182362	Columbus, OH 43218-2362
C9	SC1030	DFAS Columbus Center	DFAS-CO-JSD/Chesapeake Division	P.O. Box 182264	Columbus, OH 43218-2264
D7	SC1006	DFAS Columbus Center	DFAS-CO-JWT/Santa Ana Division	P.O. Box 182381	Columbus, OH 43218-2381
D9	SC1034	DFAS Columbus Center	DFAS-CO-JSC/Capitol Division	P.O. Box 182263	Columbus, OH 43218-2263
E5	HQ0337	DFAS Columbus Center	DFAS-CO-JN/North Entitlements	P.O. BOX 182266	Columbus, OH 43218-2266
E7	HQ0339	DFAS Columbus Center	DFAS-CO-JW/West Entitlements	P.O. Box 182381	Columbus, OH 43218-2381
E8	HQ0338	DFAS Columbus Center	DFAS-CO-JS/South Entitlements	P.O. Box 182264	Columbus, OH 43218-2264
SL	SL4701	DFAS Columbus Center	DFAS-BVPD	P.O. Box 369031	Columbus, OH 43236-9031
X1	SC1024	DFAS Columbus Center	DFAS-CO-JWA/Gulf Coast	P.O. Box 182231	Columbus, OH 43218-2231
X2	SC1002	DFAS Columbus Center	DFAS-CO-JWD/DPRO West	P.O. Box 182511	Columbus, OH 43218-2511

2.4.3 CAS/Administered By Offices

The Federal Directory of Contract Administrative Services (CAS) codes are maintained by the Defense Contract Management Agency (DCMA). CAS codes are used to identify the office that is responsible for the administrative functions for each contract (Block 10 of the DD 250). The three digit numeric codes are periodically extracted from a text file from the DCMA web site at: http://www.dcma.mil. Only government employees may use this site to download the required



file (called the CAS Book). DSCP has added to this list with a set of three additional non-standard alpha CAS codes for contracts that are administered in Philadelphia. Standard CAS codes are three digit numbers. The three additional alpha codes are manually entered into the CAS table. The CAS table contains the correlation between the CAS code and its DODAAC. In addition to the CAS Book, we get periodic email notifications from Marc Spear marc.spear@dcma.mil at DCMA whenever they reassign any of their offices.

2.4.4 DODAAC/Government Addresses

The DODAAC table is built from a very large fixed-column text file that is automatically downloaded each day from a DAAS (Defense Automated Addressing System) web site at: https://www.daas.dla.mil/dodaaf/down_dodaaf.pl. A SQL 2000 stored procedure was developed to read this file to store the extracted information in a database structure. The resultant table contains DODAAC addresses for every government and many commercial sites throughout the world. A small number of commercial sites are assigned DODAACs when they are assigned responsibility to act as a bill and hold depot to store and deliver government owned items.

The vast majority of these DODAACs are of no interest for the AAVS DataMart. For this reason, a second application was developed that runs each day to extract only pertinent DODAACs for the AAVS DataMart. Pertinent DODAACs are defined as:

- o Ship-To sites identified in the SAMMS ACF table
- Ship-To sites identified in the SAMMS ARCS tables
- o Ship-From sites identified in the SAMMS ARCS tables
- o Administered-By offices as defined in the SAMMS ACF table

2.4.5 RIC/Depot Identifiers

The RIC (Routing Identifier Code) table is built from a very large fixed-column text file that is automatically downloaded each day from a DAAS (Defense Automated Addressing System) web site with the address: https://www.daas.dla.mil/dodaaf/down_dodaaf.pl. A SQL 2000 stored procedure was developed to read this file to store the extracted information in a database structure. The resultant table contains a correlation between the RIC and DODAAC for all government depots throughout the world. A small number of commercial sites are assigned RICs when they are assigned responsibility to act as a bill and hold depot to store and deliver government owned items.

The vast majority of these RICs are of no interest for the AAVS DataMart. For this reason, a second application was developed that runs each day to extract only pertinent RICs for the AAVS DataMart. Pertinent RICs are defined as those that have pertinent DODAACs as defined in Section 2.4.4.

2.4.6 FEDLOG Data

Specific descriptions and codes are required to be placed on all invoices (DD Form 250) and MROs (DD Form 1348-1A). The data is extracted from a monthly updated FEDLOG CD-ROM from the Defense Logistics Information Services (DLIS). All of this data is tied to specific NSNs via FEDLOG. The data that is extracted and stored in the AAVS DataMart includes:



- o National Motor Freight Classification Code
- o National Motor Freight Classification Nomenclature
- o Water Commodity Code
- o Type of Cargo Code
- o Uniform Weight Classification Code
- o Product Nomenclature
- o Product Size

Product nomenclature and size data had been extracted from the SCF table of SAMMS/BSM, but it was found to be frequently incomplete and inaccurate. During the last contract year, DSCP C&T directed us to start using the product nomenclature and size data from FEDLOG instead of the SCF table.

2.4.7 DFAS Payment Status (VPIS)

Each DD250, at the CLIN level, is tracked against payment status data from a DFAS system called VPIS (Vendor Pay Inquiry System). The comma delimited text data is automatically downloaded each morning from a DFAS site at: http://www.dfas.mil/money/vendor/index.htm. The data is downloaded and archived for each manufacturer that creates DD250s. The specific data from VPIS that is archived in the AAVS DataMart includes:

- o Invoice number
- o Invoice Suffix (created by DFAS as partial payments are made)
- o Contract
- o Delivery Order
- o CLIN
- o Check Number
- Voucher Number
- o EFT Number
- o Invoice Issue Date
- o Payment Date
- o Invoice Amount
- o Payment Amount
- o Discount Amount
- o Interest Amount
- Pay Status
- o Reason Code
- o Remarks
- o Merchandise Acceptance Date
- o Tax Withheld Amount
- o Gross Invoice Amount
- o Locator Code
- o Scheduled Payment Date
- Last Action Date



2.4.8 Miscellaneous Codes

DLA uses a number of codes that each manufacturer and bill and hold contractor must be able to interpret when preparing shipments or filling orders. The codes required for all of the ARN functions extracted from DLA publications at: http://www.dlaps.hq.dla.mil/SR2.htm. The following list of codes has been extracted and stored in the AAVS DataMart:

- o **Discount Term Code**: Contractor offered discount for early payment (e.g., 1510 = 1% 15)
- o Status Codes: Requisition status (e.g., BB = Item backordered against a due-in stock)
- Violation Control Codes: SAMMS transaction violations (e.g., AD = RIC of Receiving Activity Invalid)
- o **Condition Codes**: Condition of garment (e.g., A = Serviceable, issuable without qualification)
- o Fund Codes: Explains purpose of requisition (e.g., AA = Stock Replenishment)
- o **Advice Codes**: Requestor instructions to depot (e.g., 2J = do not substitute or backorder any unfilled quantities)
- Mode of Shipment Codes: Identifies type of carrier (e.g., 5 = Surface-Small Package Carrier)
- o **Signal Codes**: Defines use of sources for DODAAC (e.g., J = Ship to DODAAC of Supplementary Address and Bill to DODAAC of Requisition)
- o **Special Measurement Codes**: Correlates the three digit special measurement code with the appropriate five digit PGC to get the nomenclature (e.g., 02044 = 507 trousers, men's p/w gab green). The data is taken from a static file maintained by DSCP and downloaded for the AAVS DataMart once. This method only works for SAMMS data. BSM has changed the format so that the PGC is now embedded in the NSN.
- State Codes: Each state is identified as east or west of the Mississippi river and for the RDC (Regional Distribution Center) region that it is in. This is a static list that was constructed from a DSCP e-mail and knowledge of the states. The data is used to determine the appropriate consolidation point for overseas shipments and to allocate consumption to the appropriate RDC.

2.5 Users and Menus

A series of related tables is maintained that manage VIM menus and users and access privileges for each user. This is done through the data tables identified Table 4.

Table 4 – User and Menu Data Tables

Name	Description
Menu Functions	The full list of all VIM functions, their indenture level, and the name of the function invoked
Users	All VIM users, passwords, email addresses, and the user group they belong to
User Groups	The name of all user groups
User Group Functions	A list that correlates which user groups have access to which functions
User Ownership	A list that correlates each user with any ownerships that exist, e.g., a DSCP buyer can own a contract, a VIM-ASAP user can own a CAGE, etc.



2.6 AAVS DataMart Data Quality and Reliability

The data quality of the AAVS DataMart data from SAMMS was manually monitored on a daily basis for a few years, but is no longer being done by the ARN staff. The results of the daily monitoring was documented in a report that was used to create a series of VIM functions that permit each manufacturer, working with DSCP personnel, to monitor and resolve any data quality problems. The report was used to identify the commonly occurring data quality problems that could be corrected with special MIL transactions (see Section 4.1.3.1 Submit Data Change Request).



3 AAVS DataMart Extractions

Different subsets of the AAVS DataMart data elements are provided to a variety of ARN team members for a variety of purposes. The customers for these extractions include ATI, LMI, CAR, and Parris Island. The data is either "pushed" to a customer's ftp site or provided via an AAVS ftp site for "as required" access and download. Access to the data is controlled with user identifications and passwords.

3.1 VIM Functions Developed and Managed by ATI

The AAVS DataMart update process for SAMMS data is initiated at 1:00 AM (all times are Eastern) each day. Each SAMMS table is checked for its update status and then downloaded as soon as it has been updated. ATI's VIM functions are primarily interested in the ACF, DUE, NIR, NIR2, three of the ARCS tables, the violation control file, and the transaction history file. The data is not transmitted, i.e., pushed, until all the pertinent tables have been updated. The transmission is started, if the data is available from SAMMS, to meet a transmission completion target of 5:30 AM. The transmission is delayed from the time the data is first available in case additional updates are made to any of the pertinent SAMMS tables. As soon as all AAVS DataMart tables are updated, the remaining tables needed by QLM-Central are "pushed" to the ATI FTP site. This process will be deleted in the near future as all of ATI's VIM functions and database are being moved to the ARN servers in Long Beach.

3.2 Access via AAVS ftp Site

A variety of custom extractions are prepared and placed in the appropriate AAVS ftp site (see Table 5) as soon as the nightly AAVS DataMart update process is complete. The QLM-Central update is delayed until 4:00 AM (East Coast Time) so that the latest of the periodic multiple SAMMS updates is transferred to ATI.

Table 5 – AAVS FI	P Sites and Content of Files	;
	Data of Interest	

FTP Site	Data of Interest
AAVS to Parris Island	Marine Corps requisitions
AAVS to DSCP	RTC requisition status
AAVS to LMI	Prices and inventory counts
AAVS to BIFRS	All retail requisitions and depot inventory levels
AAVS to QLM-Retail	Depot inventory counts
AAVS to QLM-Local	CIIPS requisition status
AAVS to QLM-Central	Nearly the entire AAVS DataMart to support ATI developed VIM functions



4 System Components

Modulant has developed two Internet browser based clusters of systems (VIM-ASAP and VIM) that access and update data from the AAVS DataMart. VIM-ASAP supports manufacturers and bill and hold contractors while VIM provides a decision support and status tracking system for DSCP and its customers. VIM-ASAP is the sole responsibility of Modulant while the rest of the VIM functions have been developed by both Modulant and ATI personnel. This document only reviews those VIM functions that were developed by Modulant.

4.1 VIM-ASAP

VIM-ASAP is used by apparel manufacturers and bill and hold contractors to access their contracts, record production status, prepare all invoice and shipping documents, track payment status from DFAS, prepare material release orders and shipping documents, and generate all of the required electronic transactions for all invoices and shipments. The system is accessed using an Internet Browser at http://vim.ct-dscp.com. The version in use at the end of the current contract was Version 2.1. Only authorized users can log onto the system (see Figure 6). A users manual has been developed and released (see Appendix D "VIM-ASAP v 2.0 Users Manual"). An overview document has also been developed and release (see Appendix E "VIM-ASAP Overview).

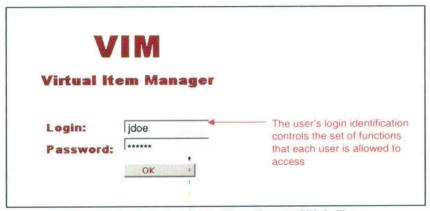


Figure 6 – VIM-ASAP User Login Web Page

All VIM users use the same web site to initiate their use of the system. Each user is identified as either a manufacturer or not. Each user that is a manufacturer is assigned to a CAGE and is only given access to data that is pertinent to that CAGE. They are also given access to a specific set of functions that are called the VIM-ASAP functions. Each CAGE is also identified as either a regular manufacturer or one that is also a bill and hold contractor who also performs DLA depot responsibilities. Each type gets a specific set of functions that are required to support the things they need to do. Users are further identified as either having or not having administrative control over their own data. Every function that can be used by manufacturers and bill and hold contractors and their administrators is shown in Figure 7, Figure 8, and Figure 9. All of the data that is generated by any of these functions is kept in the AAVS DataMart for use by any of the other VIM functions. The administrator's functions (see Figure 7) permit each manufacturer and bill and hold contractor to identify their own users, initialize data for all their invoices (DD Form 250), set a variety of options about what the system does for the user, submit data change



requests to DSCP for potential SAMMS data quality problems, and periodically adjust quantities of items on the production floor or owned by the manufacturer, and add or delete NSNs from the list of items they produce.

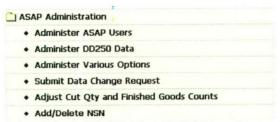


Figure 7 - Administrative Functions Supported By VIM-ASAP

The manufacturing functions (see Figure 8) work with a digital copy of their contracts from the AAVS DataMart. The series of related functions permits each manufacturer to start production of any CLIN in their contracts, view a copy of active contracts (DD Form 1155), view a matrix of all their CLINs and shipments, prepare and subsequently view invoices for completed items (DD Form 250), track the status of their payments from DFAS, prepare and subsequently view all their shipping documents (DD Form 1387).



Figure 8 - Manufacturing Functions Supported By VIM-ASAP

The bill and hold depot functions (see Figure 9) work with a digital copy of their requisitions and inventory records from the AAVS DataMart. The series of related functions permits each bill and hold manufacturer to access their queue of unfilled requisitions (a.k.a., MROs DD Form 1348-1A), create verbal or written orders when responding to emergency orders, reprint any unshipped MROs, prepare and subsequently review all the required shipping documents (DD Form 1387), and respond to any follow-up inquiries.



Figure 9 - Bill and Hold Depot Functions Supported By VIM-ASAP

VIM-ASAP provides its users with access to a number of reports (see Figure 10), including a matrix (shipments versus CLINs) of all contract shipments and invoices, a list of all invoices and payments, a record of DSCP's inventory counts for each bill and hold contractor, access to a carrier's web site to track the status of a shipment, an Excel list of all shipped MROs, and a list of all active contracts in DSCP C&T's database.





Figure 10 – Report Functions Supported By VIM-ASAP

4.1.1 VIM-ASAP Impact on Manufacturing Processes

VIM-ASAP addresses the traditional manufacturing processes (see Figure 11) in several significant ways. It converts a series of independent activities where documents are created with reentered and reformatted data into one where most of those activities are either eliminated or dramatically changed. The traditional process requires the preparation of invoices (DD Form 250) using a variety of tools (e.g., Excel, Adobe Acrobat, etc.) where all of the data must be extracted from a paper contract and entered into all of the appropriate blocks of the form. Most of the same data is then re-entered into a DFAS system by either the contractor using WInS (Web Invoicing System) or WAWF-RA (Wide Area Work Flow – Receiving Acceptance); or by DFAS personnel using their internal system. In all cases, the data is completely re-entered into another system. The same process is used for shipping labels (DD Form 1387), bar coded container labels, and then into SAMMS/BSM via a system called DAMES (DAASC Automated Message Exchange). Keeping all of this data and forms consistent is a nearly impossible task, not to mention, a great deal of work. VIM-ASAP changes the ways invoices are created and eliminates the use of paper contracts, the manual preparation of all forms, as well as the entry of data into WInS, WAWF-RA, and DAMES.

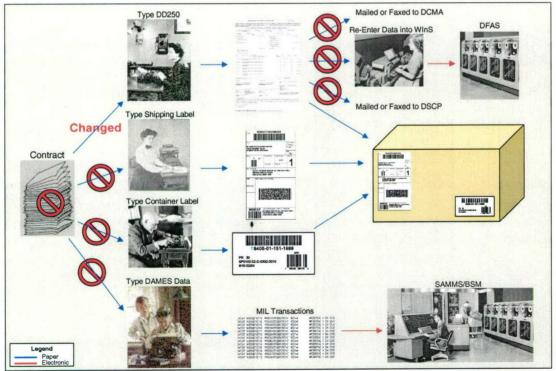


Figure 11 – Traditional Manufacturing Processes Affected by VIM-ASAP



The manufacturing process using VIM-ASAP looks very different (see Figure 12) from the transitional process. All documents and electronic transactions are created from a single source of contract data called the AAVS DataMart. The contract data contains nearly everything required to complete all documents and electronic transmissions. The single input of the current shipment quantity for each CLIN (Contract Line Item Number) initiates the creation of the electronic invoice transmission to DCMA and DFAS, the printing of all required paper (packing slips and shipping documents), and the generation of all required electronic transmissions to SAMMS/BSM (i.e., D4S MILSTRAP transactions). There are two principal advantages in the use of VIM-ASAP. The first can be seen in the reduction in time it takes to prepare all the documents and electronic transactions. The second, the creation of all documents and electronic transactions from a single source has far ranging impacts. The impacts can be seen in accurate and timely supply chain data for decisions by DSCP and in timely and full payments by DFAS to the contractors. The payment process is significantly improved because problems nearly never occur when DFAS receives all the documents and transactions required to make a payment. Because everything is produced from a single source, there cannot be a discrepancy between the digital DD250 transmitted to DCMA and DFAS, the digital DD250 signed by the QAR (Quality Assurance Representative), and the contract data extracted by DFAS from SAMMS/BSM. When these three sources match, DFAS has no problems in making timely payments.

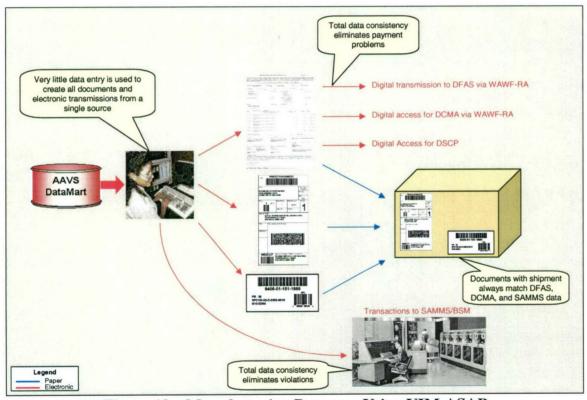


Figure 12 - Manufacturing Processes Using VIM-ASAP

4.1.2 VIM-ASAP Impact on Bill and Hold Contractor's Depot Processes

The use of VIM-ASAP causes a major change in a bill and hold contractor's depot processes (see Figure 13). It converts a series of independent activities where documents are created with reentered and reformatted data into one where most of those old activities are eliminated. The



traditional process requires the preparation of Material Release Orders (DD Form 1348-1A) from DAMES transactions using a variety of tools (e.g., PerForm Flow, Adobe Acrobat, etc.) where all of the data must be extracted from an 80-column text record and entered into all of the appropriate blocks of the form. The same process is used for shipping labels, bar coded container labels, and then into SAMMS via DAMES for all of the required MILSTRIP and MILSTRAP transactions. Keeping all of this data and forms consistent is a nearly impossible task, not to mention, a great deal of work. VIM-ASAP changes the way MROs are created, the manual preparation of all forms, as well as the extraction and entry of data into DAMES.

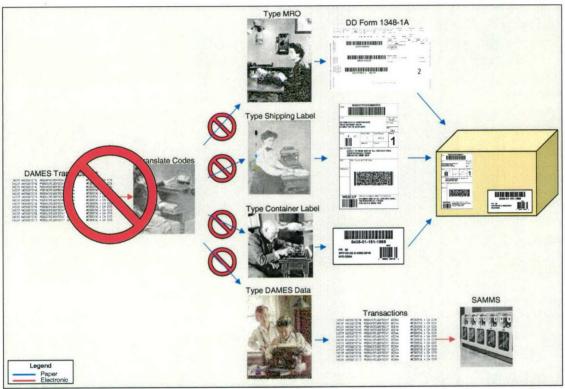


Figure 13 - Bill and Hold Contractor's Depot Processes Affected by VIM-ASAP

The bill and hold contractor's depot processes using VIM-ASAP look very different (see Figure 14) from the transitional process. All documents and electronic transactions are created from a single source of requisition and inventory data called the AAVS DataMart. The requisition and inventory data contains nearly everything required to complete all documents and electronic transmissions. The selection of one or more requisitions initiates the printing of all required paper (MROs, pick lists, and shipping documents), and the generation of all required electronic transmissions to SAMMS/BSM (e.g., ARO MILSTRIP transactions). There are two principal advantages in the use of VIM-ASAP. The first can be seen in the reduction in time it takes to prepare all the documents and electronic transactions. The second, the creation of all documents and electronic transactions from a single source has far ranging impacts. The impacts can be seen in accurate and timely supply chain data for decisions by DSCP and the total elimination of violations. Because everything is produced from a single source, there cannot be a discrepancy between the original requisitions, all of the paper documents, and the electronic transactions sent to SAMMS/BSM. When these sources match, DSCP can effectively manage the total supply chain and the contractor can focus on filling orders, not in correcting data problems.



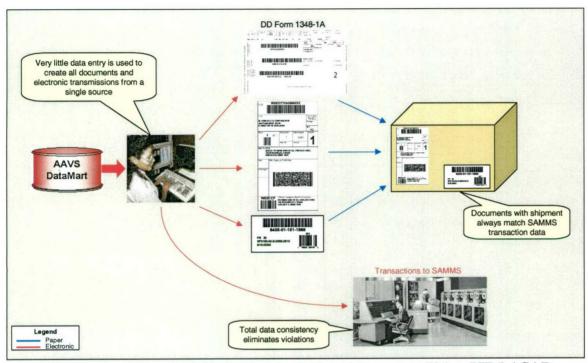


Figure 14 - Bill and Hold Contractor's Depot Processes Using VIM-ASAP

4.1.3 Examples of VIM-ASAP Functions

The VIM-ASAP users manual (see Appendix D) reviews the use of each of the VIM-ASAP functions identified in the menu listings of Section 4.1. A handful of the more important functions are reviewed in this section to identify their significance to both DSCP and the contractors.

4.1.3.1 Submit Data Change Request

Manufacturers can use this function to report contract data quality problems for specific types of data (see Figure 15). The user identifies the source of the problem and a proposed solution and then clicks the "Submit to DSCP" button. The problem goes into the manufacturer's queue (as shown in the bottom half of the web page) at the same time that it goes into DSCP's queue. The responsible item manager at DSCP is notified of the existence of a new data change request with an email message. Data change requests can be submitted for the following types of data:

- Administered by
- Discount terms
- FOB Code
- Pay office
- Unit pack quantity



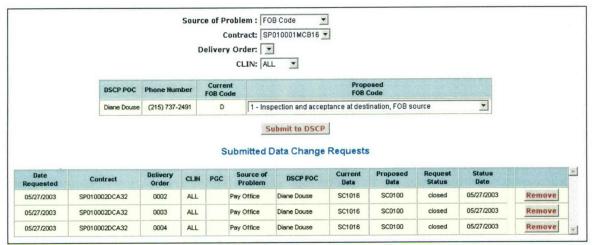


Figure 15 - Submit Data Change Request

4.1.3.2 Digital Contract

The first significant function displays a digital contract (DD From 1155 "Order for Supplies or Services) as extracted from SAMMS/BSM (see Figure 16). It is important that each contractor compare their digital contract with their paper contract looking for discrepancies. Each can have mistakes because they are not developed from a single source. Each is prepared separately. Once all discrepancies are resolved, there cannot be a problem with the rest of the process because from this point forward, all data and documents used by the contractor, DSCP, DCMA, and DFAS work from a single source of data. The discrepancies have always existed, but they did not show themselves until DFAS needed to review all data and documents to pay the invoice. This was the worst time to find discrepancies because it not only delayed payments, but it required all participants to coordinate a fix to one or more of the sources. One of the significant advantages for the VIM-ASAP contractor is the capability to recognize and resolve all discrepancies at the front of the process rather than the end.



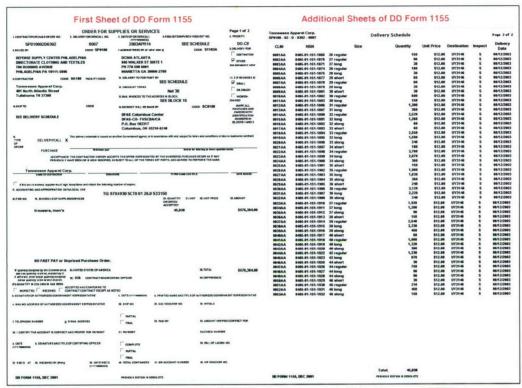


Figure 16 – Sample of Digital Contract (DD Form 1155)

4.1.3.3 View Contract Shipments and Invoices

Every open contract and shipment is collected and organized into a matrix (see Figure 17) where the X-axis contains all the CLINs and the Y-axis contains all the shipments. Running totals are also kept for each axis. The matrix provides a complete record of all shipments, the quantity shipped for each CLIN on each shipment, and totals for the all shipments and all CLINs. The small green "X" at the top of the matrix can be used to export the data to Excel. This function is also used to view any DD250 and to check the status of each shipment as tracked by the carrier.

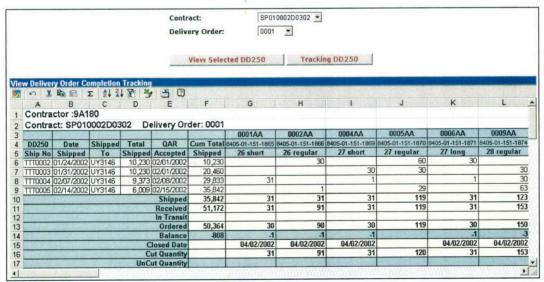


Figure 17 - View Contract Shipments and Invoices



4.1.3.4 Invoice Preparation

Invoices are prepared (see Figure 18) from the same data that is used to prepare the contract (DD Form 1155). Nearly all of the data that is used to prepare the invoice is extracted from the contract data so that no mistakes can be made. The only critical input that is done by the user is the quantity for each CLIN that is being shipped. The creation of the invoice from a single source of data means that there can be no discrepancy between the contract, the digital data transmitted to DCMA and DFAS, the digital DD250 signed by the QAR, and DFAS's contract validation database that was extracted from the same source as the VIM-ASAP contract. The inability to create a discrepancy has meant that VIM-ASAP contractors are paid promptly nearly 100% of the time.

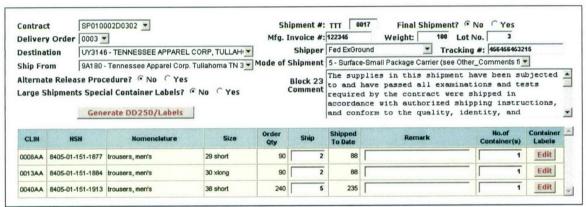


Figure 18 – Invoice Preparation (DD Form 250)

VIM-ASAP produces a paper DD Form 250 that is included with the shipment as a packing slip. The system also produces the container labels (see Figure 19) as well as all the shipping labels per MIL-STD-129P. The single source of data for all documents means that no mistakes can be made.



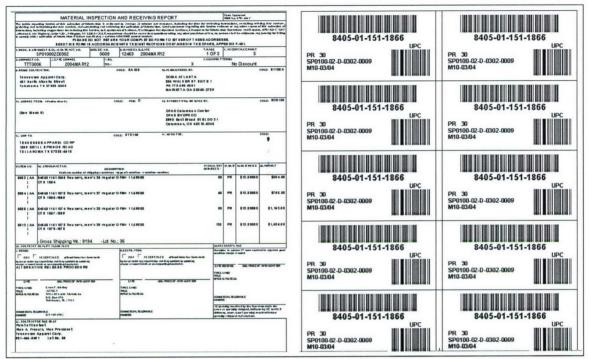


Figure 19 - Paper Invoice and Related Container Labels

4.1.3.6 Bill and Hold Contractor Requisition Processing

Each bill and hold contractor is presented with a daily queue of requisitions that have been assigned to them (see Figure 20). The requisitions are organized by ship-to location so that shipments to a single location can be easily kept together. An MRO is printed (see Figure 21) for each requisition that is included with the shipment. VIM-ASAP also produces a packing slip and all the required shipping (see Figure 22) and container labels. The advantage of the use of VIM-ASAP for processing requisitions comes from the creation of all documents and electronic transactions from a single source of data. There can be no mismatch between the original requisition, the related documents, and the electronic transactions sent to SAMMS/BSM (MILSTRIP transactions).

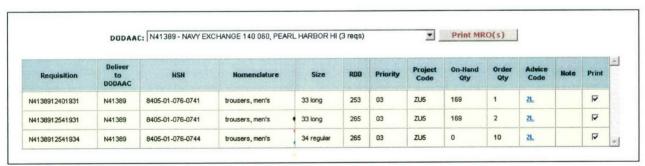


Figure 20 - Selection of Requisitions for Processing



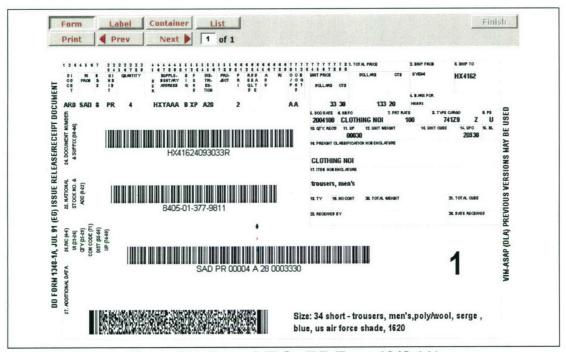


Figure 21 – Paper MROs (DD Form 1348-1A)

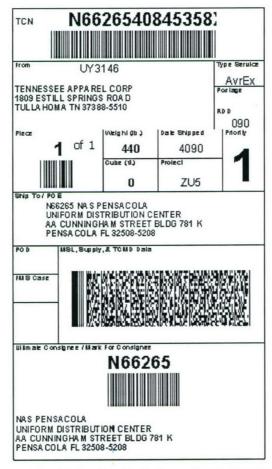


Figure 22 – Shipping Label per MIL-STD-129P



4.1.3.7 DSCP and Contractor Inventory Balances

DSCP's inventory counts for each NSN (see Figure 23) at a bill and hold contractor's site are organized and displayed by Product Group Code (PGC) so that a contractor's records can keep in sync with DSCP's inventory records.

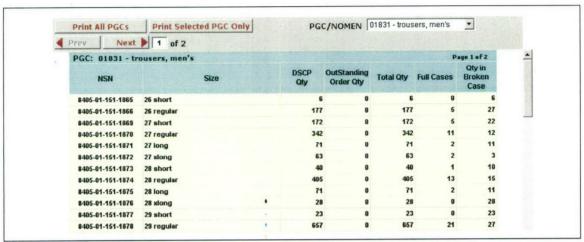


Figure 23 - DSCP Inventory Records for Each Bill and Hold Contractor

4.2 VIM – Virtual Item Manager

The current version of VIM supports all of the functions listed in Table 6. The functions are organized hierarchically with only the lowest level function able to be executed. The functions can be used by all DSCP personnel and its customers and manufacturers to analyze data from the AAVS DataMart, make specific decisions, prepare documents, etc. All of the VIM functions were developed by either AdvanTech or Modulant. This section of the report only goes into detail for some of the Modulant developed functions that have been implemented (see first column of Table 6 for a cross reference to the appropriate section). VIM is accessed using an Internet browser at http://vim.ct-dsep.com.

Table 6 – VIM Functions, Status, and Development Responsibility

Section	Function	Status	Resp.
4.2.1	Update User Profile	Implemented	Modulant
	System Admin		
	Change CAGE	Implemented	Modulant
	Set IRM RIC	Implemented	Modulant
4.2.2	Edit Menu	Implemented	Modulant
4.2.2	Structure	Implemented	Modulant
	Membership	Implemented	Modulant
	View Error Log	Implemented	Modulant
	View Security Violation Log	Implemented	Modulant
	Add New Shipper	Implemented	Modulant
	Check Login Status	Implemented	Modulant
	CAGE Initialization	Implemented	Modulant
	Update WAWF-RA User ID	Implemented	Modulant



Section	Function	Status	Resp.
	ASAP Administration		
	Administer ASAP Users	Implemented	Modulant
	Administer DD250 Data	Implemented	Modulant
	Administer DFAS Transmissions	Implemented	Modulant
	Administer Various Options	Implemented	Modulant
4.1.3.1	Submit Data Change Request	Implemented	Modulant
	Adjust Cut Qty and Finished Goods Counts	Implemented	Modulant
	Add/Delete NSN	Implemented	Modulant
	Manufacture Garments		
4.1.3.2	Generate DD1155	Implemented	Modulant
	Process Contracts/Orders - Start Production	Implemented	Modulant
	Print Carton Labels	Implemented	Modulant
4.1.3.4	Prepare DD250s	Implemented	Modulant
	View/Edit Existing DD250s	Implemented	Modulant
	Prepare Shipment Labels	Implemented	Modulant
	View Existing Shipping/Container Labels	Implemented	Modulant
	Manage Depot Operations		
4.1.3.6	Review Orders and Generate MROs	Implemented	Modulant
	Process Verbal/Written Orders	Implemented	Modulant
	Print Unshipped MROs	Implemented	Modulant
	Prepare Shipment Labels	Implemented	Modulant
	View Existing Shipping/Container Labels	Implemented	Modulant
	Review and Reply to Follow-Up Inquiries	Implemented	Modulant
	Reports		
4.1.3.3	View Contract Shipments and Invoices	Implemented	Modulant
4.1.3.5	Track DD250 Payments	Implemented	Modulant
4.1.3.7	Inventory Count	Implemented	Modulant
	Requisition Shipment Status	Implemented	Modulant
	Shipped Requisitions	Implemented	Modulant
	Active Contracts	Implemented	Modulant
	Wholesale		
	Analyze and Decide		AdvanTech
	Generate Recommended Stock Transfers		AdvanTech
	Add New Item		AdvanTech
	Enter Special Orders/ESOC		AdvanTech
	Data Management		
	Assign Contract to Buyer	Implemented	Modulant
	Modify DVD Table		AdvanTech
	Revise Reorder Objectives		AdvanTech
	Revise Wholesale Inventory Factors		AdvanTech
	Manager Controlled Items		AdvanTech
	Modify Distribution Rules		AdvanTech
	Modify Distribution Rules by PGC		AdvanTech
	Resolve Data Change Requests		
4.2.3	Resolve Contract Data Change Request	Implemented	Modulant



Section	Function	Status	Resp.
4.2.4	Resolve NSN Data Change Request	Implemented	Modulant
	Submit Data Changes to SAMMS		AdvanTech
4.2.5	Submit ACF Data Changes to SAMMS	Implemented	Modulant
4.2.6	Submit NSN Data Changes to SAMMS	Implemented	Modulant
	Reports		AdvanTech
	View Contract Assignments	Implemented	Modulant
	View Total Supply Chain Inventories		AdvanTech
	View Expected Zero Balance		AdvanTech
	View Excess Inventory Summary		AdvanTech
	View Customer Information		AdvanTech
	View Inventory Trends		AdvanTech
4.2.7	View Consumption Based Tariffs	Implemented	Modulant
4.2.1	View Delivery Order Completion Tracking		AdvanTech
	Overdue Requisition Status by PGC		AdvanTech
	View Order Ship Times		AdvanTech
	QLM Local - SAMMS Comparison		AdvanTech
4.2.8	Requisition Shipment Tracking	Implemented	Modulant
	View Contract Shipments and Invoices	Implemented	Modulant
	Wholesale Local		
	System		
	Cost Centers		AdvanTech
	User Access		AdvanTech
	Stockroom		
	Stock Catalog		AdvanTech
	Supplemental Bin Location		AdvanTech
	Transaction History		AdvanTech
	Total Asset Visibility		AdvanTech
	Inventory		
	View Issues		AdvanTech
	Process Returns		AdvanTech
	Process Misc. Issues		AdvanTech
	Process Exchanges		AdvanTech
	View Credits		AdvanTech
	Inventory Adjustments		AdvanTech
	Process Physical Inventory		AdvanTech
	Physical Inventory		
	Enter Second Counts		AdvanTech
	Purchasing		
	View DSCP Requisitions		AdvanTech
	View Open DCSP Requisitions		AdvanTech
	Receiving		AdvanTech
	Process DSCP Receipt		AdvanTech
	View DSCP Receipts		AdvanTech
	Shipping Request		
	Add Shipping Request		AdvanTech



Section	Function •	Status	Resp.
	Shipping Request Follow up		AdvanTech
	Close Shipping Request		AdvanTech
	View Shipping Request		AdvanTech
	Enter Shipping Request		AdvanTech
	Manage Depot Operations		
	Ship Orders		
	Review Orders and Generate MROs	Implemented	Modulant
	Print Unshipped MROs	Implemented	Modulant
	Prepare Shipment Labels	Implemented	Modulant
	View Existing Shipping/Container Labels	Implemented	Modulant
	Reports		
1	Requisition Shipment Tracking	Implemented	Modulant
	Shipped Requisitions	Implemented	Modulant
	Due Member	- Implement	
	View Due Member Data		AdvanTech
	Delete Due Member Data		AdvanTech
	Fulfill Due Member Data		AdvanTech
	Reports		/ dvarrioor
	Recommended Replenishment Report		AdvanTech
	Print Stock Catalog		AdvanTech
	Stock Status		AdvanTech
			AdvanTech
	Stock Move Report Expected Zero Balance		AdvanTech
	·		AdvanTech
	Excess Inventory		AdvanTech
	View Overdue Requisitions		AdvanTech
	View A2A Redistribution		AdvanTech
	Print Bin Labels		AdvanTech
	Print Adjustments		AdvanTech
	Receiving Report	Implemented	Modulant
	View Consumption Based Tariffs	Implemented	AdvanTech
	View Daily Suggested Order List		AdvanTech
	View QLM Local Receipts Inquiry		AdvanTech
	QLM Local Update History		
	Requisition Shipment Tracking	Implemented	Modulant
	Audit Data Management		AdvanTash
	Add/Update User Information		AdvanTech
	Add/Update Phase Information		AdvanTech AdvanTech
	Add/Update Form Information		
	Add/Update Recruit Activity		AdvanTech
	Audit Reports		1.1
	Report by Phase		AdvanTech
	Report by Platoon		AdvanTech
	3D Body Scanner Sizing Validation		AdvanTech
	Retail		
	Requisition Shipment Tracking		AdvanTech



Section	Function	Status	Resp.
	Data Administration		
	Set Wholesale Parameters		
	Modify Customer Profiles		AdvanTech
	Modify PGC Demographics		AdvanTech
	Define Customer Types		AdvanTech
	Define Bill & Hold Contractor's DODAAC/RIC	Implemented	Modulant
	Reports		
	View CAGE Codes		AdvanTech
	View Condition Codes	2	AdvanTech
	View Ownership Codes		AdvanTech
	View Status Codes		AdvanTech
	View Customer Types		AdvanTech
	View Download History		AdvanTech
	ASTRA		
	System		
	Stockrooms		AdvanTech
	MILSTRIP Document Types		AdvanTech
	View Hold Codes		AdvanTech
	Manage		7.070.1700.1
	View Unofficial Redistributions		AdvanTech
	View Unprocessed Issue Documents		AdvanTech
	View Documents on Hold		AdvanTech
	View Unprocessed Receipts		AdvanTech
	Reports		
	View Detailed ASTRA Activity		AdvanTech
	View Daily ASTRA Report		AdvanTech
	View Wholesale Local Status Summary		AdvanTech
	VIM/QLM Central Reorder Objective Analysis		AdvanTech
	View Daily Demand Allocation Transactions		AdvanTech
			AdvanTech
	Unprocessed Credit Returns Unreconciled Credit Returns		AdvanTech
			Advanteen
	Contracting Analyze and Decide		1
	Analyze and Decide Define Production Mix of Sizes	Implemented	Modulant
		Implemented	Modulant
	Place/Release Hold on Delivery Orders	Implemented	Modulant
	Analyze New Contract Minimums	Implemented	AdvanTech
	Data Management		AdvanTech
	Update Contract Master Table		AdvanTech
	Identify Contract Minimums and Maximums	Implemented	
	Set Production Capacity and Minimum Lot Size	Implemented	Modulant
	Reports		AdvanTech
	View Remaining Contract Capacity		AdvanTech
	View Contract Expiration Report		AdvanTech
	View Production Size Mix Overrides	Implemented	Modulant



Section	Function	Status	Resp.
	Manufacturing		
View DD 1155 View Contract Shipments and Invoices View ASAP Compliance	Implemented	Modulant	
	View Contract Shipments and Invoices	Implemented	Modulant
	View ASAP Compliance	Implemented	Modulant
	Exit		

Both Modulant and AdvanTech developed some of VIM functions. Each operates from a copy of the AAVS DataMart on a server that is located at their offices on the two coasts. At the end of the current contract period, AdvanTech had nearly completed their move to the ARN servers in Long Beach. A common look-and-feel and security methods were agreed to and then implemented by both development teams.

4.2.1 Update User Profile

This is the first function that every VIM user sees at the top of their menu. It permits each user to update their profile (see Figure 24).



Figure 24 – Update User Profile Web Page

4.2.2 Edit Menu Membership

A small number of users that are identified as "Master" users are the only ones permitted to edit menu memberships. This function (see Figure 25) is used to permit each user group to access a specific set of functions. All user groups are defined across the X-axis while all VIM functions are defined along the Y-axis. A specific user group is authorized to access a specific function by clicking at the appropriate intersection. The number of the authorized user group will appear at the selected intersection. The user group is unauthorized by clicking at the intersection of a previously authorized function.



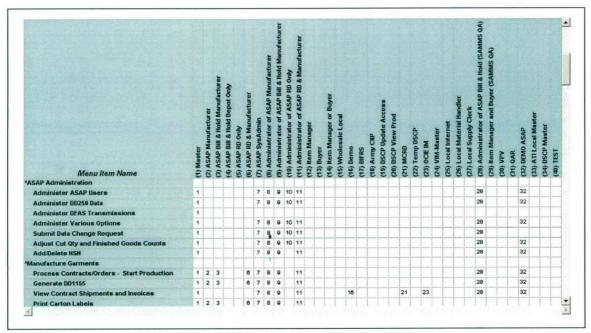


Figure 25 – Edit Menu Membership Web Page

4.2.3 Resolve Contract Data Change Request

This function is used by DSCP personnel to review and disposition (see Figure 26) potential data quality problems with contracts that were identified by manufacturers that use VIM-ASAP. The pull-down lists contain only reported problems that have not yet been resolved. DSCP personnel can accept the proposed change, revise the proposed change, or reject any change. The "Update" button causes an immediate change to be made to the AAVS DataMart and a SAMMS transaction (e.g., YPE) to be transmitted to SAMMS to permanently update SAMMS. At this time, BSM does not support any transactions that can update their data.



Figure 26 - Resolve Contract Data Change Request Web Page



4.2.4 Resolve NSN Data Change Request

This function is used by DSCP personnel to review and disposition (see Figure 27) potential data quality problems with NSNs that were identified by manufacturers that use VIM-ASAP. The pull-down list of PGCs contain only reported problems that have not yet been resolved. DSCP personnel can accept the proposed change, revise the proposed change, or reject any change. The "Update" button causes an immediate change to be made to the AAVS DataMart and a SAMMS transaction (e.g., YPE) to be transmitted to SAMMS to permanently update SAMMS. At this time, BSM does not support any transactions that can update their data.

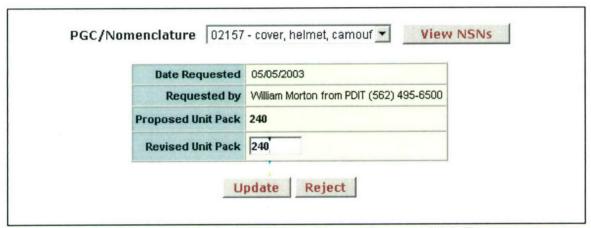


Figure 27 - Resolve NSN Data Change Request Web Page

4.2.5 Submit ACF Data Changes to SAMMS

This function can be used by DSCP personnel to make specific changes to any contract and delivery order (see Figure 28) for any reason. It may be a problem found by DSCP personnel or simply a change to the contract. The user identifies the source of the problem and then enters the contract number and selects the delivery order number. The current value of the data is displayed along with a pull-down list of all valid values. The user selects the desired value and then clicks the "Update" button, causing a SAMMS transaction to be created and transmitted to SAMMS. At this time, BSM does not support any transactions that can update their data.



Figure 28 – Submit ACF Data Changes to SAMMS Web Page



4.2.6 Submit NSN Data Changes to SAMMS

This function can be used by DSCP personnel to make specific changes to any PGC for any reason see (Figure 29). It may be a problem found by DSCP personnel or simply a change to the PGC. The user identifies the source of the pertinent PGC. The current value of the data is displayed along with an area to enter the new value. The user selects the desired value and then clicks the "Update" button, causing a SAMMS transaction to be created and transmitted to SAMMS. The "Current Unit Pack" is only displayed if all NSNs for that PGC have the same value. At this time, BSM does not support any transactions that can update their data.

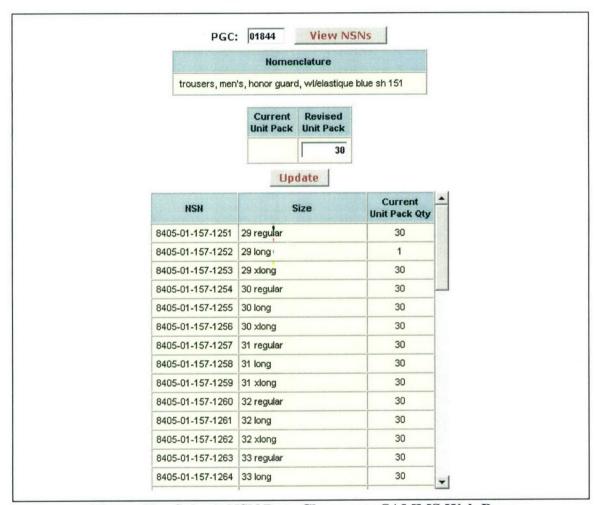


Figure 29 - Submit NSN Data Changes to SAMMS Web Page

4.2.7 View Consumption Based Tariffs

The View Consumption Based Tariffs function (see Figure 30) can display annualized retail consumption and tariffs for all sources of consumption or for specific Marine Corps or Army recruit training centers individually. Consumption data is automatically archived on the first Saturday of each new month looking back or all activity for the prior month. The oldest month's data is subtracted and discarded and the new month is added to the annualized number. Consumption data is tracked as follows:



- Marine Corps recruit training center consumption is calculated from the movement of cases from bulk storage to the issue line.
- Army recruit training center consumption is calculated from daily issues to recruits
- All other consumption (primarily retail stores) is calculated from requisitions for the replenishment of consumed stock.

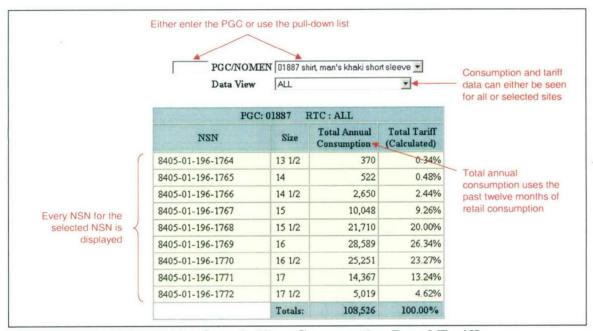


Figure 30 – Sample View Consumption Based Tariffs

4.2.8 Requisition Shipment Tracking

The Requisition Shipment Tracking function can be used by anyone who wants to check on a requisition through the carrier's web site (see Figure 31). The user simply enters the requisition number and any suffix code and then clicks the "View" button. A click on the carrier tracking number will cause the carrier's web site to be accessed for the details about the shipment.



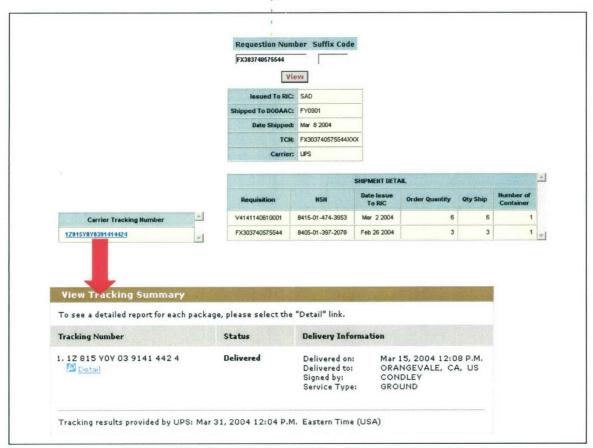


Figure 31 – Sample Requisition Shipment Tracking



5 Accomplishments During This Contract Period

This Final Technical Report covers the work done on SP0103-02-D-0016 Delivery Orders 0003, 0006, 0007, and 0008. The tasks were performed beginning on March 21, 2003 and were completed on March 31, 2004. The accomplishments are organized into the following five primary categories:

5.1 Develop and Support the AAVS DataMart

AAVS DataMart accomplishments are focused on the development and implementation of the server and database infrastructure required to support the ARN program. The accomplishments included:

- a) Conversion from SAMMS to BSM: DSCP-C&T decided to implement BSM on December 1, 2003 for only the BDU commodity. A small amount of BSM test data became available from the C&T Data Warehouse in mid-October and remained available until the end of November when the production conversion took place. The BSM test database was sparsely populated which meant that combination of circumstance testing was very limited, e.g., the test data contained no DVD orders so no testing could be done to verify that DVD order data would be handled properly in production. A great deal of time was spent during the month of November working with the BSM test team. On December 1, 2003, all BDU related data was removed from SAMMS and BSM became the exclusive source for this data. We spent the next two months working with DSCP C&T and their BDU manufacturers to identify production data and interface problems and to develop workaround plans when they were possible. We also prepared a special weekly data extract so that DSCP had the data they needed to override BSM payment holds so that BDU manufacturers could be properly paid. Some of the specific problems we encountered, included
 - 1) Split requisitions were not assigned suffix codes
 - 2) Payment data was not passed to VPIS
 - 3) CLINs were automatically closed without accounting for the variance percentages
 - 4) CLINs were incorrectly changed from the SAMMS to BSM format
 - 5) Contract order quantities were reset incorrectly
 - 6) DVD DD250s could not be created because data was missing from the ARCS tables
 - 7) In the clear address data (REDF table) was not populated correctly
- b) OCIE: The OCIE effort was started by visiting a number of Army CIF sites and by researching and gaining access to Army legacy system data (i.e., SARSS and CIF-ISM). After a great deal of effort, we were able to get data downloads from both SARSS and CIF-ISM. We were also able to get access to user's manuals and a variety of other documents so that we could construct data dictionaries for each of the tables from SARSS and CIF-ISM.
- c) **Technology Architecture**: The work on this task was focused on getting all of AdvanTech's VIM functions and databases moved from their servers in Annapolis to the ARN servers in Long Beach. All the required databases and software directories have been initialized and tested on the staging servers. The databases and software directories have been moved to the production servers for final testing prior to implementation.



- d) Development Environment: We evaluated the impact of upgrading the ARN servers and VIM to Windows Server 2003, MS SQL 2003, and ASP.NET. Windows Server 2003 is already released, but MS SQL 2003 is still in Beta test mode. We will implement the two Microsoft products at the same time, but only after both products are released and stable. Both Microsoft products have many desirable features that would improve the performance and security for the ARN servers and both products offer a smooth and clear migration path. The third upgrade for ASP to ASP.NET is a far more complex undertaking, but well worth the effort. ASP is interpreted software while ASP.NET is compiled and takes advantages of many Microsoft advances. Compiled code runs very much faster than interpreted code. To plan the conversion effort, we had an experienced ASP.NET staff do a study of existing VIM software to understand what needed to be done to make the conversion (see Appendix B).
- e) Security Practices: During the contract performance period, we reviewed a number of DoD security requirements documents, provided information to DLA's IT security organization, made a number of changes to the configuration of the ARN network, and had someone from Modulant's offices in South Carolina try to gain unauthorized access to the ARN servers from outside the ARN network (see Appendix H). Fortunately, each attempt to gain unauthorized access to the ARN servers failed. There was one failure early in the year, but not to any production data. The ARN info site at http://info.ct-dscp.com/ was hacked because we did not apply our normal security practices to this site that only contains static web pages used for things like "lessons learned". We immediately restored the site and applied our normal security practices to this site as well. The problem has not reoccurred.
- f) Utilities: We continue to automate nearly all of our recurring database update processes so that we minimize our data maintenance efforts. During the past contract year we created VIM functions to automated the data entry for new carriers; initialize the various data tables that need to be updated when a user converts to WAWF-RA; and initialize the CAGE data required whenever a new VIM-ASAP user starts using the system for production.
- g) **FEDLOG**: We originally acquired data from the FEDLOG CD because it was the only source of data for shipment related information, e.g., cargo codes. During the past contract year, we were directed by DSCP C&T to also use FEDLOG for item nomenclature and size data. The nomenclature and size data from SAMMS was very cryptic, was not complete, and had many data entry errors. FEDLOG data is far more complete and accurate.
- h) Automated Data Extraction: During the contract performance period we automated the extraction of FEDLOG data from the monthly updated CDROM. We also converted the extraction of CAGE data from a monthly CDROM to a daily access of an on-line database that is maintained by DLIS.

5.2 Manufacturer Support

VIM-ASAP accomplishments are focused on the development and implementation of new and expanded functions that support manufacturers and bill and hold contractors in their roles as part of DSCP's supply chain management processes. The accomplishments included:



- 1. VIM-ASAP's Material Release Order (DD Form 1348-1A) and carton and military shipping labels (MSL) were modified to conform to MIL-STD-129P (effective February 17, 2004). The new standard for the MSL permits the lower half of the form to contain each carrier's additional data so that the MSL can be used as a combination military and commercial shipment label. Once the top-half of the MSL was implemented, we started work on the lower half and found that some of the larger carriers (e.g., FedEx and UPS) have established a real-time electronic interface that permits us to not only format the bottom half of the MSL, but to schedule pickups, acquire the commercial tracking number, and then, after the shipment is complete, acquire the received date, actual cost, and the name of the person that signed for the receipt. At the time of the preparation of this final technical report, we were working with FedEx on preparing the format of the import/export data and on getting their approval for the format and content of the lower half of the MSL.
- 2. We developed and implemented an interface to a new version of DCMA's WAWF-RA (Wide Area Work Flow Receiving Acceptance) that is used by QARs (Quality Assurance Representative) to inspect and disposition DD250s for source-inspected shipments. The new version is referred to as 3.0. We were able to complete all the software modifications and testing and implement the new version of VIM-ASAP on the same day that WAWF-RA implemented their new version of their program.
- 3. VIM-ASAP manufacturers occasionally have problems getting completely paid for some of their invoices. The problem is normally isolated to a single CLIN where the quantity received or receipt date has been incorrectly posted. To solve the problem, DFAS needs to know everything about the non-payment, including contract number, shipment number, CLIN, etc. To help the VIM-ASAP manufacturer resolve the problem, we setup an "DFAS Inquiry" button on the payment tracking function that performs a DFAS payment inquiry by automatically formatting and transmitting an email message to DFAS that provides all the information that DFAS requires to identify and resolve the problems.
- 4. All Item Managers (IM) and selected contracting personnel (KO) now receive an email notification whenever any VIM-ASAP manufacturer makes a shipment of an NSN or contract that the IMs and KOs are responsible for. The IMs are always notified because their ORC is always associated with the NSN that is being shipped. The KOs use a new VIM function that permits them to identify contracts that they want to be notified about whenever a shipment occurs.
- 5. Some of DSCP C&T's customers, particularly the Navy, prefer to use the Universal Product Code (UPC) rather than the NSN. To support their customers, DSCP C&T requested that VIM-ASAP be modified to include a bar-coded NSN and UPC on each carton label. To accomplish this, we expanded the AAVS DataMart to include an NSN to UPC cross reference table and then modified the VIM-ASAP software that produces the carton label to add the UPC and its bar code to each label.
- 6. VIM-ASAP was modified to automatically include the Certificate of Conformance (COC) on the face of the DD250 whenever that option is coded in SAMMS/BSM by DSCP C&T. VIM-SAP was also modified to permit users to select an option to have the Alternate Release Procedure applied to each DD250.



- 7. Some VIM-ASAP users need to occasionally make very large shipments where thousands of cartons are shipped at one time. VIM-ASAP normally produces a carton label for each carton, which means that the user's computer needs to be able to handle a very large print file. We found that some user's computers simply did not have the capacity to handle these very large print files. To solve this problem, we now provide each user to select the option for "Large Shipments Special Container Labels". When they select this option, VIM-ASAP produces one full page of carton labels for each NSN in the shipment. The manufacturers can use each of the NSN pages and a copier to quickly make as many carton labels as they need.
- 8. VIM-ASAP was designed to support DSCP C&T's commodities and yet most of the work that was done is equally applicable to many, if not all other commodities. We tested this premise by acquiring a sample extraction of SAMMS data from DSCR's variant of the C&T Data Warehouse. We reviewed the data to understand what needed to be done to map the data to its C&T equivalent so that existing VIM-ASAP software could be used with DSCR data. We found that they mapping was very straightforward and that VIM-ASAP could be used with the data from DSCR. During the past year, we also worked with a number of people to promote the use of VIM-ASAP at DSCR, but were unable to make any progress until we started working with a WAWF-RA Integrated Product Team (IPT) with representatives from DCMA, DLA, DSCP, DSCR, and DSCC. At the conclusion of the contract-reporting period, we are working closely with DSCR to acquire their production data on a daily basis to permit their manufacturers to become users of VIM-ASAP and its interface to WAWF-RA.
- 9. VIM-ASAP was initially designed to support sewn product manufacturers that produced deliverable end-items, e.g., dress pants. There are great similarities between how VIM-ASAP can be used to support both sewn products and textiles, but there are also distinct differences. During the past contract year, VIM-ASAP was modified to address those differences. The primary difference is that, unlike the delivery of a specific quantity of shirts, textile rolls can come in many different lengths and each roll has its own unique length. DSCP defines a normal length and how much it will accept that is less than a normal length. VIM-ASAP was modified to prepare unique textile roll labels and to ensure that textile shipments complied with the contractually imposed size restrictions.
- 10. The VIM-ASAP supported processes, documents, and electronic transactions for most of DSCP C&T's commodities are very similar to those required for chemical protective items, but there are some unique requirements. The differences include: 1) a small sample of chemical protective items must be sent to an authorized test facility before the bulk of the items can be shipped; 2) a surveillance number must be assigned to each lot; and 3) special bar codes need to be placed on each DD250 and on each carton. VIM-ASAP was modified to support these unique requirements.
- 11. Any manufacturer (e.g., Unicor) that produces items at multiple sites for the same contract can now control how much is produced and shipped from each site through a VIM-ASAP production allocation function that assigns production responsibilities to each site.
- 12. The Army's Clothing Initial Issue Points (CIIP) can now use VIM-ASAP to process requisitions that require them to ship some of their stock to other Army CIIPs.



5.3 Develop and Support VIM Functions

VIM accomplishments were focused on the development and implementation of functions that support DSCP Item Managers, contracting officers, and others with improved visibility into wholesale, retail, and manufacturing data and activities. The accomplishments included:

- 1. A series of VIM functions were created to provide DSCP C&T personnel with access to VIM-ASAP related data, including all manufacturer's and bill and hold contractor's 1) digital contracts as extracted from SAMMS/BSM in the form of DD1155s; 2) digital shipment data as extracted from the AAVS DataMart in the form of DD250s; 3) matrix of all shipments for a given contract against all CLINs for that contract, including visibility into the production status of each CLIN; 4) requisition shipment status as extracted from each carrier's status tracking web site: and 5) DD250 shipment status as extracted from each carrier's status tracking web site.
- 2. A VIM function was created to permit DSCP C&T to control of their own user IDs and passwords.
- 3. The Menu program controls user access and permissions to utilize specific VIM functions. The program was updated to conform to DoD required security practices.
- 4. A new menu structure editing function was added to VIM to improve PDIT's editing of the menu and to permit AdvanTech to do its own editing from its offices in Annapolis. The web function permits new functions to be added, moved to be part of any cluster of functions, and then have the function's URL entered or changed.
- 5. A new VIM function was created to assign each VIM menu function to the user group that has access to that function. The function permits the user to click at the intersection of a Y-axis list of functions and an X-axis list of user groups.
- A new VIM function as added to permit DSCP C&T's KOs to assign themselves to any contract so that they receive all VIM-ASAP shipment notifications for the selected contract(s).

5.4 Training Support

Training accomplishments were focused on the development and delivery of training materials for VIM-ASAP, VIM, and general ARN related topics. The accomplishments included:

- 1. The VIM-ASAP training materials and the information web site (http://info.ct-dscp.com) were updated with new training materials and lessons learned material a number of times throughout the year as updated versions were released.
- A CD-ROM "movie" of the use of VIM-ASAP was prepared and has been distributed to all new VIM-ASAP users. The CD-ROM uses voice-over and dynamic screen capture software to walk new users through the use of major VIM-ASAP functions, such as the preparation of a DD250.



3. Prepared a number of PowerPoint presentation materials with scripts for use by the ARN II Program Manager and DSCP personnel.

5.5 Project Management

The project management related tasks included:

- 1. Reviewed the new contract and laid out the new structure and content for the CDRLs for this contract.
- 2. Conducted a large of number internal project meetings to keep the Modulant ARN team working together on the right things.
- 3. Prepared a series of monthly CDRL reports as required by the contract.
- 4. Prepared for and attended a number of ARN meetings in Long Beach, Annapolis, Philadelphia, and Fort Belvoir.
- 5. Traveled to DSCP to attend a number of meetings to help with the requirements definition for a number of ARN systems.
- 6. Conducted a two-day meeting in Long Beach with the ARN II Program Manager to review the status of our efforts.
- 7. Developed robust software configuration management practices, including control over the methods used to update production software. We provided AdvanTech with a digital copy of the "SourceSafe" documentation as part of our efforts to develop a consistent set of tools and procedures for all ARN II software. We conducted a number of weekly conference calls with AdvanTech to coordinate our mutual software configuration management methods on the ARN single server.

5.6 Other RDCs (D.O. 0006)

The Other RDCs related tasks included formatting and transmitting data as Extensible Markup Language (XML) data exports. Manufacturers and bill and hold contractors that have production control and/or financial systems can select to receive XML formatted files that they can process and load into their internal systems. They can select to receive data for the following classes of data:

- 1. <u>Issued Contracts</u>: All currently active contracts, at the CLIN level, are extracted, formatted, and transmitted to manufacturers that request a download of this data.
- 2. <u>Shipped Contracts (i.e., DD250)</u>: Manufacturers select a date range and then receive a download of DD250 data at the CLIN level that is extracted, formatted, and transmitted.
- 3. <u>Issued Requisitions</u>: All currently assigned and open (a.k.a., BA status) requisitions are extracted, formatted, and transmitted to bill and hold contractors that request a download of this data.



4. <u>Shipped Requisitions</u>: Bill and hold contractors select a date range and then receive a download of MRO data that is extracted, formatted, and transmitted.



6 Conclusions

The primary focuses of the past year's efforts were to make a success of VIM-ASAP and the use of its manufacturing data by DSCP C&T personnel through VIM. I believe that we can declare that we achieved our goals in two very significant ways. The first can be measured by the results experienced by manufacturers, such as:

- 1. VIM-ASAP created and tracked the payments for roughly 7,000 electronic invoices (DD Form 250) from 60 manufacturers during the contract year without creating a single violation. The vast majority of the 7,000 invoices were fully paid within 30 days. Over 30-day Accounts Receivables were normally running at 0% although three vendors were seeing higher percentages. We are working with DFAS to try to isolate what is causing the delay for the three manufacturers. Even with a few payment problems, VIM-ASAP has achieved a dramatic improvement in the timeliness and accuracy of DFAS payments and has virtually eliminated the need for manufacturers to spend long hours on the phone with DFAS, trying to get paid.
- 2. VIM-ASAP automatically generated more than 75,000 MILSTRIP and MILSTRAP transactions during the past year and created only a single violation. The violation was caused by a user entering an unacceptably large ship quantity that exceeded the order quantity for an MRO. Prior to the use of VIM-ASAP all 75,000 would have been manually typed into DAMES and, based on prior history, a large percentage would have been entered incorrectly and need to be fixed by DSCP personnel.
- 3. VIM-ASAP has been successful in many other less obvious ways, such as in making a significant reduction in manufacturing clerical efforts, in eliminating the cost of using outside services to prepare bar coded container labels, and in eliminating the need for manufacturers to work with other DoD systems such as DAMES, WAWF-RA, and VPIS.

The second way we achieved ours goals can be seen in DSCP's use of VIM to access DD250s; monitor contract, production, and shipment status; and promptly and easily correct SAMMS data quality problems. Our success at DSCP can also be seen in the total elimination of the time consuming need to manually correct vendor submitted MILSTRIP and MILSTRAP violations.

The success of our efforts can also be seen in the positive statements and email we have received from many manufacturers.

Appendix A

Acronyms List

Appendix A - ARN Acronyms List

AAFA American Apparel and Footwear Association

AAVS ARN Asset Visibility System

ACF Active Contracts File from SAMMS
AMA Apparel Manufacturing Architecture

ARCS Active Requisition Control/Status from SAMMS

ARN Apparel Research Network

ASAP ARN Supply-chain Automated Processing

ASTRA ARN Supply-chain Transaction Repository for Action

ATI AdvanTech, Inc.

BDU Battle Dress Uniform

BIFRS Balance Inventory Flow Replenishment System

BSM Business Systems Modernization

C&T Clothing and Textile

CAGE Commercial And Government Entity

CAR Clemson Apparel Research

CAS Contracting Administrative Services

CIF Central Issue Facility

CIIP Clothing Initial Issue Point
CLIN Contract Line Item Number

CRDL Contract Data Requirements List

DAAS Defense Automated Addressing System

DAM Defense Apparel Manufacturer

DAMES DAASC Automated Message Exchange System

DCMA Defense Contract Management Agency

DD Form 250 DoD standard Material Inspection and Receiving Report, a.k.a. Invoice

DD Form 1155 DoD standard order for supplies or services DD Form 1348-1A DoD standard issue release/receipt document

DFAS Defense Finance and Accounting Service

DIC Document Identifier Code
DLA Defense Logistics Agency

DLIS Defense Logistics Information Services

DoD Department of Defense

DODAAC Department of Defense Activity Address Code

DORRA DLA Office of Operations Research and Resource Analysis

DOS Days of Supply

DSCC Defense Supply Center Columbus
DSCP Defense Supply Center Philadelphia

DSCR Defense Supply Center Richmond

Appendix A - ARN Acronyms List

DSD Decision Support Database
DSS Distribution Standard System
DUE Due-In Table from SAMMS
EDI Electronic Data Interchange
EFT Electronic Fund Transfer
EOF Electronic Order Form

FG Finished Goods

FSC Federal Supply Class
FTP File Transfer Protocol

GFM Government Furnished Material
ISM Installation Support Modules
ISP Internet Service Provider

LMI Logistics Management Institute

MILSTRAP Military Standard Transaction Reporting and Accounting Procedures

MILSTRIP Military Standard Requisitioning And Issue Procedures

MOCAS Mechanization of Contract Administration System

MRO Material Release Order

NIR National Inventory Record from SAMMS

NSN National Stock Number

OCIE Organization Clothing and Individual Equipment

ORC Output Routing Codes from SAMMS

OST Order Ship Time

PDIT Product Data Integrated Technologies, Inc.

PGC Product Group Code

PIX Private Internet Exchange

OAR Quality Assurance Representative

QLM-C Quality Logistics Management – Central
QLM-L Quality Logistics Management – Local
QLM-R Quality Logistics Management – Retail
RAID Redundant Array of Independent Disks

RDC Regional Distribution Center
REDF Requisition Exception Data File

RIC Routing Identifier Code RTC Recruit Training Center

SAMMS Standard Automated Material Management System

SARSS Standard Army Retail Supply System SCF Supply Control File from SAMM

Appendix A – ARN Acronyms List

SCS Supply Chain System
SSC Standard Supply Code

TCN Transportation Control Number

THF Transaction History File

VCSF Violation Control and Suspense File from SAMMS

VIM Virtual Item Manager

VPN Virtual Private Network

VPIS Vendor Pay Inquiry System

WAWF-RA Wide Area Work Flow – Receiving Acceptance

WInS Web Invoicing System

WIP Work In Process

XML Extensible Markup Language

Appendix B

ARN Development Environment Upgrade Evaluation

1.0 TABLE OF CONTENTS

1.0		LE OF CONTENTS	
2.0	EXE	CUTIVE SUMMARY	. 4
	2.1	Introduction	. 4
	2.2	Current State of ARN	. 5
	2.3	Purpose of Study	. 5
	2.4	Scope	
3.0	CUR	RENT ASP ENVIRONMENT	. 7
	3.1	ASP Built-In Objects	. 7
	3.1.1		
	3.1.2	Request Object	. 7
	3.1.3	Server Object	. 7
	3.1.4	Application Object	. 8
	3.1.5	Session Object	. 8
	3.1.6	Object Context Object	. 8
	3.2	ASP Language Support	. 8
	3.3	ASP Data Base Support	. 8
	3.4	ASP Scalability	
	3.5	ASP Third Party Support	. 9
	3.6	ASP Browser Support	
	3.7	ASP Execution Environment	
	3.8	ASP Deployment	
	3.9	ASP Versioning Approach	
	3.10	ASP Stability	
	3.11	ASP Debugging	
4.0	A SP	NET ENVIRONMENT	
	4.1	ASP.NET Objects	
	4.2	ASP.NET Language Support	
	4.3	ASP.NET Database Support	
	4.4	ASP.NET Scalability	
	4.5	ASP.NET Browser Support	
	4.6	ASP.NET Execution Environment	
	4.7	ASP.net Deployment	13
	4.8	ASP.net Versioning Approach	
	4.9	ASP.net Stability	
	4.10	ASP.net Debugging	
5.0	ASP	-vs- ALTERNATIVES	
	5.1	ASP 3.0 Active Server Pages based on MS Visual Basic 6.0	
	5.1.1		
	5.1.2		
	5.2	ASP.NET Active Server Pages based on C# and Visual Basic.NET	
	5.2.1		
	5.2.2		
	5.3	PHP: Hypertext Processor	
	5 3 1	Pros:	16

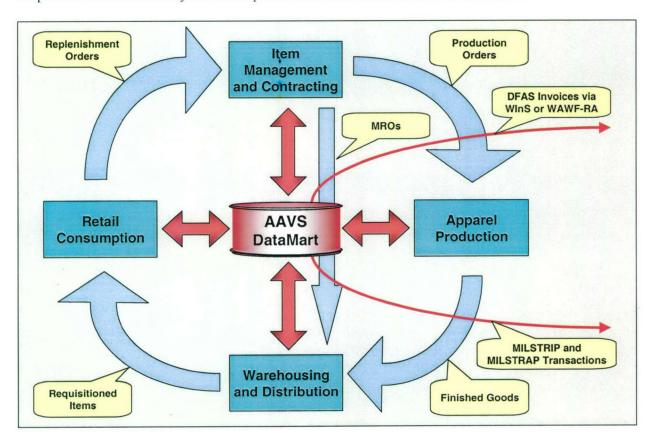
Appendix B – ARN Development Environment Upgrade Evaluation

	5.3.2	Cons:	16
	5.4 JS	SP Java Servlet Pages	17
	5.4.1	Pros:	
	5.4.2	Cons:	
	5.5 Si	ummary	17
6.0		Code Analysis	
7.0	OUAL	ITY ASSURANCE	20
		erformance Testing	
		unctional Testing	
		utomation Test	
	7.4 Is	sue Management	
8.0		CLUSION	
		enefits	
		ligration Factors and Risks	

2.0 EXECUTIVE SUMMARY

2.1 Introduction

The DLA (Defense Logistics Agency) and DSCP (Defense Supply Center Philadelphia) sponsored ARN (Apparel Research Network) program's primary goals are to reduce total supply chain costs and inventory levels while minimizing retail shortages. The foundation for the achievement of these goals is the existence of a web accessible database that provides total supply chain asset visibility to all functions that make decisions or consumes apparel items (see Figure 1). Modulant's ARN assignments were to create the web accessible database, create decision support tools that utilize this database, and develop tools for use by apparel manufacturers and bill and hold contractors that capture the data needed to fill voids in the total supply chain asset visibility picture. Modulant initiated three key projects to address these assignments. The ARN Asset Visibility System database (AAVS Data Mart) was developed to create the central repository for total supply chain asset visibility. VIM (Virtual Item Manager) was created to provide visibility and decision support tools. VIM-ASAP (ARN Supply-chain Automated Processing) was developed to support apparel manufacturers and bill and hold contractors. All of these efforts were focused on providing total supply chain visibility to help DLA and the military service's personnel make more informed decisions.



2.2 Current State of ARN

The AAVS DataMart is an integrated collection of data from a variety of legacy and ARN developed systems. The legacy system data provides part of the total supply chain data, e.g., contracts, requisitions, depot inventory levels, payment responsibilities, administrative offices, requisitions, and manufacturing, retail, and wholesale addresses. The ARN developed systems provide the rest of the data about the total supply chain, e.g., bill and hold contractor shipments, retail consumption patterns, and production status. The current version of the AAVS DataMart contains apparel items for all military services and data related to those items, e.g., retail addresses that received shipments. Completeness of data and consistency between sources of data was a significant problem that was addressed with Modulant developed screening software.

VIM is a collection of web accessible tools that utilize data from the AAVS DataMart to provide visibility and decision support. Current VIM tools provide views of retail assets, manufacturing production status, warehouse inventory levels at specific depots, tracking status for shipments, contract production and shipment status, SAMMS data quality corrections, and hyperlinks to a series of other ARN developed functions.

VIM-ASAP is a web accessible tool that is used by defense apparel manufacturers and bill and hold contractors to record production status, create invoices and shipping documents, track payment status from DFAS, operate a depot, and generate all appropriate electronic transactions to complete the picture of the total supply chain. VIM-ASAP performs all of these functions by accessing contract, requisition, and product data to present each contractor with only their own specific subset of the information. It facilitates the capture of the shipment data by utilizing the AAVS DataMart data to capture the information needed to complete a all required DoD forms and transactions. This reduces the time it takes each manufacturer to prepare their documents and improves the quality and completeness of each document and transaction.

The results of these efforts can be seen in:

- The significant inventory reductions that have been seen at the Marine Corps Recruit Training Centers (RTC), improvements at the Army CIIPs (Clothing Initial Inventory Points)
- The growth of the use of VIM-ASAP to capture production status and shipment data for DSCP
- Improved manufacturer's cash flow,
- And in a reduction in the manufacturer's efforts required to complete forms and update systems.

The results can also be seen in the timeliness and accuracy of all the electronic transactions and resultant inventory data.

2.3 Purpose of Study

This study examines the options and advantages associated with upgrading the present ARN environment to an alternate Doc.Net programming framework.

Appendix B - ARN Development Environment Upgrade Evaluation

This study shows that Doc.NET programming framework built on a common language runtime can be used on a server to build powerful Web applications. Doc.NET offers several important advantages presented in this study over previous Web development models.

2.4 Scope

This study reviews the alternatives to the current ASP framework. Sections 3 and 4 examine the current ASP environment and the proposed ASP.NET features. ASP.NET, PHP, and JSP are examined with the respective pros and cons of each system presented in section 5.0.

An in depth analysis presented in section 6.0 identifies those applications that are reusable if a change is implemented and the labor effort to convert existing code.

Section 7 provides a review of the performance, functional and automation tests that must be conducted to assure the product quality.

3.0 CURRENT ASP ENVIRONMENT

3.1 ASP Built-In Objects

ASP has six built-in objects to build dynamic sites that will work in any browser.

- 1. Response Object
- 2. Request Object
- 3. Server Object
- 4. Application Object
- 5. Session Object
- 6. Object Context Object

The ASP Built-In objects are components that make web development dynamic. The objects are interfaces based, not object based so are often called components. They can be extended with COM objects or COM+ (including transactions) that can interact with ASP objects. In addition, they support default interface COM programming, but not multiple interfaces. COM and COM+ objects tend to need GUI tools that automate their creation.

3.1.1 Response Object

The Response Object is to:

- Send text to the browser
- Halt the page being served in midstream if required.
- Transfer the page being served
- Control whether a page is served to the browser in one or many transfers (buffering)
- Sends cookies to the browser

3.1.2 Request Object

The Request Object is used to:

- Retrieve any Form values that a page submitted to this script
- Retrieve any cookies from the browser
- Retrieve some vital server and script information.
- Retrieves any information the browser willingly transferred to the server

3.1.3 Server Object

The Server Object functions:

 Create any COM objects (either supplied by Microsoft for FREE, bought by 3rd party vendors, or built using tools like C++, Visual Basic) the web server needs to do it's work

Appendix B - ARN Development Environment Upgrade Evaluation

- Set the timeout so that long tasks can be completed. Pages automatically timeout in 90 seconds if they do not complete their task to conserve server resources being consumed by runaway scripts, infinite loops and the like.
- Encode text so that characters not allowed in a browser parameter can be used without incident
- Transforms text that are HTML tags into the correct codes to display properly

3.1.4 Application Object

The Application Object functions:

- Store information that many scripts need to access globally
- Can be used to store objects that many scripts will access
- If tasks that affect application variables might be affected adversely if task switching occurs, the Application Object offers a LOCK and UNLOCK capability to force such operations to not be interrupted

3.1.5 Session Object

The Session Object functions are:

- Store data attached to a specific user/browser with minimal effort on the programmer's part
- Can be used to store data on the server that can only be accessed by scripts but never is stored on the client's cookies

3.1.6 Object Context Object

- Assist scripts in processing data in a transactional fashion so that any code block can specify a coordinated transaction succeed or fail with simple mechanisms
- Can trigger events when code succeeds that will attempt to commit transactions
- Can intercept unanticipated code failures and issue a transactional rollback.

3.2 ASP Language Support

Two built-in script languages (VBscript, 'Jscript) that are NOT compiled. Some third party languages: Perlscript, Python but not so robust and actually tend to crash the server.

3.3 ASP Data Base Support

Database support via ActiveX Data Objects (ADO) which communicates with ODBC and OLEDB databases. Most database display is done through record sets and loops. Most database manipulation requires code coupled to back-end database that may fail if drivers are switched and needs to be written carefully.

3.4 ASP Scalability

Scalability without work is limited because two of the core objects (session, application) do not scale on web-farms. Those objects must be replaced with home-brewed or commercial objects if that functionality is wanted on webfarm. Scalability, multi-tier application building and transactional applications are possible to be built but the programmer has few tools to make the task simple. It is just hard work and the programmer must have experience building such systems in the past to build an effective one today.

3.5 ASP Third Party Support

Includes some essential COM components that are needed to build websites (browser detection, etc.). Sites with complex needs will have to build or buy many COM components to complete tasks.

3.6 ASP Browser Support

ASP is browser neutral

3.7 ASP Execution Environment

- Tightly coupled to Internet Information Services (IIS).
- The ASP engine is undocumented so that it cannot easily be extended and only low-level ISAPI filters can be created to accomplish tasks that ASP will not support easily.
- In "classic ASP", the first person to access a script compiles it but if the compiled script cache fills, scripts are removed and if a machine physically restarts or a service restarts the compilation process is triggered by first user access.

3.8 ASP Deployment

Once an application is created, its settings reside in the Windows Registry, Binary Metabase, MTS catalogs, IIS settings. Transferring /copying an application from server is a complex tedious job with few automatic tools. Component registration is done via a variety of software packages all of which require a system administrator run these utilities.

3.9 ASP Versioning Approach

- New versions of components require stopping and starting the server
- As new component versions are deployed, old versions are replaced

3.10 ASP Stability

Environment assumes code and libraries are written carefully and debugged and stress tested. Flaws in codes or component or memory leaks cause system deterioration, and may require soft and hard reboots.

3.11 ASP Debugging

- No debugging tools unless Visual Interdev is editor. Debugging tools are crude and have limits on how deep they can examine the system.
- Error trapping in all languages has severe limits. VBscript has ON ERROR RESUME NEXT and not ON ERROR GOTO. Javacript on server has TRY/CATCH but no other language does.

4.0 ASP.NET ENVIRONMENT

ASP.NET is a programming framework built on the common language runtime that can be used on a server to build powerful Web applications. ASP.NET offers several important advantages over previous Web development models:

- Enhanced Performance: ASP.NET is compiled common language runtime code running on the server. Unlike its interpreted predecessors, ASP.NET can take advantage of early binding, just-in-time compilation, native optimization, and caching services right out of the box. This amounts to dramatically better performance before any line of code is written.
- World-Class Tool Support: The ASP.NET framework is complemented by a
 rich toolbox and designer in the Visual Studio integrated development
 environment. WYSIWYG editing, drag-and-drop server controls, and
 automatic deployment are a few of the features ASP.NET provides.
- Power and Flexibility: Because ASP.NET is based on the common language runtime, the power and flexibility of that entire platform is available for Web applications. The .NET Framework class library, Messaging, and Data Access solutions are seamlessly accessible from the Web. ASP.NET is also language-independent, so any language that best applies to your application can be selected or partitioned across many languages. Further, common language runtime interoperability guarantees that existing investments in COM-based development is preserved when migrating to ASP.NET.
- Simplicity: ASP.NET makes it easy to perform common tasks, from simple
 form submission and client authentication to deployment and site
 configuration. For example, the ASP.NET page framework allows user
 interfaces that cleanly separate application logic from presentation code and to
 handle events in a simple, Visual Basic like forms processing model.
 Additionally, the common language runtime simplifies development, with
 managed code services such as automatic reference counting and garbage
 collection.
- Manageability: ASP.NET employs a text-based, hierarchical configuration system, which simplifies applying settings to server environments and Web applications. Because configuration information is stored as plain text, new settings may be applied without the aid of local administration tools. This "zero local administration" philosophy extends to deploying ASP.NET Framework applications as well. An ASP.NET Framework application is deployed to a server simply by copying the necessary files to the server. No server restart is required, even to deploy or replace running compiled code.

- Scalability and Availability: ASP.NET has been designed with scalability in
 mind, with features specifically tailored to improve performance in clustered
 and multiprocessor environments. Further, processes are closely monitored and
 managed by the ASP.NET runtime, so that if one misbehaves (leaks,
 deadlocks), a new process can be created in its place, which helps keeps
 application constantly available to handle requests.
- Customizability and Extensibility: ASP.NET delivers a well-factored
 architecture that allows developers to "plug-in" code at the appropriate level. In
 fact, it is possible to extend or replace any subcomponent of the ASP.NET
 runtime with custom-written components, facilitating custom authentication or
 state services.

4.1 ASP.NET Objects

ASP.NET supports the same objects as ASP described above in Section 3.0, and in addition supports the following:

- Can consume COM and COM+ objects, and can be used to create objects that support interfaces and inheritance. Languages can inherit and override methods of objects created in DIFFERENT languages. These can be built with text editors and GUIs are a convenience not a necessity.
- Can make its components into SOAP listeners and proxies with trivial amounts of work by just setting a few attributes
- The "guts" of the component glue and framework are not tied to INTEL or WINDOWS. The first release is Windows but porting to other computing environments is feasible.

The NGWS (Next Generation Web Services) Framework, which has ALL the facilities needed to build a ROBUST commercial product of the scope of Office 2000. NGWS is a huge library with thousand of objects that are self-documenting and can be programmatically interrogated. They range from browser interaction to cryptography to GDI/GDI+ libraries, sockets and higher-level constructs.

4.2 ASP.NET Language Support

Three built in COMPILED languages (has NO scripting languages): VB7 / VBNET, C# and JScript / JSNET.

4.3 ASP.NET Database Support

- Database support via ADO.net which communicates with ODBC and OLEDB databases, XML Streams, Binary Streams is loosely coupled so differences between database vendors do not EVER affect programming model.
- Database display NEVER involves loops. Templates, grouped controls, Grids and many other declarative structures eliminate need for loops and flexibility is

provided so programmer can control all interaction between templates declaritivity.

4.4 ASP.NET Scalability

Sessions and all features are built with web-farms and supports "web gardens" (computer with multiple CPUs) as assumed environment.

4.5 ASP.NET Browser Support

Validators and built-in components use detection to render GUIs that behave consistently on a variety of browsers. ASP.net has lots of facilities so that controls can detect the browser and render the GUI very differently depending on what browser requests the page without having to expose this sensing to higher level callers.

4.6 ASP.NET Execution Environment

- Loosely coupled to IIS to ensure that it runs on any web server without requiring any IIS infrastructure
- Extremely extensible and high-level utilities called HTTP Handlers can accomplish the most complex of tasks without inheriting the ENTIRE ASP+ infrastructure or bloat.
- Components and scripts have their compiled image written to disk so that compilation persists.

4.7 ASP.net Deployment

Huge complex applications store their settings and components in ASCII files and copying these ASCII files from server to server will result in a perfectly deployed application with no effort. There are no component registration tools because components do not make any registry entries nor do they need to be compiled before being copied to server. All configuration/security options rely in ASCII/XML files.

4.8 ASP.net Versioning Approach

- If a component is rewritten to have a new version, the next user accessing a page
 that accesses the new version runs on a new thread. The previous versions and
 new versions co-exist in memory since a running component live on a thread. Of
 course, the ASP.net worker process will eventually finish all user requests
 communicating with old component and quietly quit wasting memory on it.
- aspx or any programs can target any version of an assembly since side-by-side execution is supported.

4.9 ASP.net Stability

ASP+ worker process assumes all components and code are likely to crash, leak memory and have bad code (infinite loops, forgetting to advance record sets). The ASP+ worker process notices bad code and then isolates the thread the code is on, allows no new code

to run on same thread, and then destroys the thread and all bad code. If code leaks memory, ASP+ worker can create a new instance of it to run requests and tear down the previous instance that has memory leaks without ever rebooting.

4.10 ASP.net Debugging

- Powerful debugging, millisecond timing and profiling are built-in. These can be done without GUIs
- All current page requests can be logged and inspected after the fact
- Debugging can also be done with GUI tools that are not married to any editor specifically
- Error trapping at code level is simplified because there are many error-trapping directives (about 8X more than ASP). Most languages support TRY/CATCH and several other robust error trapping styles.

5.0 ASP -vs- ALTERNATIVES

This section compares the pros and cons of ASP with ASP.NET, PHP, and JSP

5.1 ASP 3.0 Active Server Pages based on MS Visual Basic 6.0.

5.1.1 Pros:

- ASP can be run via IIS 5.0 (native), Sun ONE Active Server Page 4.0. There is no need for any other runtime/server add-ons other than IIS 5.0 if run natively.
- Code base is widely known and established. Behavior is rather balanced and expected.
- ASP will not utilize a user account outside of the IUSR and IWAM accounts
 unless specified otherwise. This lessens the possibility for exploits if the
 aforementioned user accounts have been restricted via the IIS Lockdown/URL
 Scan Utility and Local Security Settings.

5.1.2 Cons:

- IIS 5.0 can be exploited rather easily via "brute force" tactics
- The IUSR and IWAM accounts can be exploited if machine is not patched/updated correctly
- ASP pages if coded incorrectly allow non-parameterized functions to be run via URL input (ex http://localhost/scripts/default.asp?url=/badpage/exploit.asp). This includes unauthorized deletion and editing of connected SQL databases.
- ASP pages run slower in comparison to PHP and ASP.NET.
- Database connection may be in clear text format. This will allow hackers to attach to the SQL database with authorized user credentials.
- ASP pages utilize Active X to include certain methods. Active X can also be
 exploited in machines that are not only up-to-date, but also in machines where the
 Active X has too high of a security privilege.

5.2 ASP.NET Active Server Pages based on C# and Visual Basic.NET.

5.2.1 Pros:

- ASP.NET code is pre-compiled. Library and method allowances can be hard set via compiled (read not easily compromised) code.
- Code base is rather straight forward
- ASP.NET utilized the ASPNET user to run the ASP.NET pages. This user does
 not have the ability to logon locally via Local Security Rights by default. It also
 does not have executive privileges to many location on the %/system root (read –
 main MS Windows install drive)
- ASP.NET executes faster then ASP
- ASP.NET can be run natively with IIS 5.0 (and higher) and the most recent version of the .NET framework

- ASP.NET ties in more closely to the MSXML parser, thus XML interaction is more efficient.
- ASP.NET is less likely to fall to URL specified/non-parameterized exploits.

5.2.2 Cons:

- ASP.NET needs to utilize an external framework (.NET Framework) and this increases the amount of RAM needed per machine/application.
- ASP.NET can be exploited if permissions for ASPNET are elevated.
- ASP.NET is a newer technology and exploits are still not yet found.
- ASP.NET C# based pages are still vulnerable to exploits that plagued versions 1.0 and 1.0 SP1 (1.0.3705) of the .NET Framework.
- MSXML 3.0 SP2 and 4.0 SP1 still have some XML/HTTP Request exploits that
 effectively open up the machines hard drive structure and file enumeration to
 remote perusal.
- ASP.NET has to be compiled even between newer version builds of the same project to reflect code changes.
- ASP.NET does not lend itself to clustered or load balancing very well since
 processes are run via the .NET Framework that does not allow to converse with
 other frameworks (security reasons) when file system objects (FSO) are utilized.
- All development should be based upon .NET version 1.1.

5.3 PHP: Hypertext Processor

5.3.1 Pros:

- Fast, Fast, Fast.
- Code is more secure backend than ASP or ASP.NET
- Built-in usage, manipulation, and parsing of XML is extremely quick and intuitive
- PHP lends itself well to any environment i.e., Solaris, Windows, Mac, among other operating systems. It is not dependent upon IIS 5.0 (or higher). Can be run via Apache, which is also more secure than IIS 5.0.
- Has a rather C++ object oriented (programming language) structure, therefore any C++/OOP skills lend themselves well to PHP
- It can utilize either DOM or SAX methods of parsing XML. SAX is a much faster and more efficient method of parsing/validating XML.
- Runs as a server daemon (read service) that uses the Local System account. It does not write to file system (read hard drive) unless specified...
- It is **free** (read open-source project) and constantly updated.

5.3.2 Cons:

 PHP is a different scripting language that is not covered natively via the MS Visual Studio.NET.IDE. Modulant has committed itself to developing with MS Visual Studio Net • Would unnecessarily introduce a learning curve.

5.4 JSP Java Servlet Pages

5.4.1 Pros:

- JSP applications are based on Sun Java's Runtime Environment which has been proven to be very secure
- Full featured applications can be quickly built via the pre existing applets
- Learning curve for Modulant would be rather low, on a par with ASP/ASP.NET
- JSP applications do not utilize a user account
- Can be run via the rather full-featured, yet free (read open source) Apache TomCat.
- Code is compiled and not script based. Compiled code is less susceptible to script exploits.
- JSP applications can be developed and deployed on many platforms.
- Utilizes a JDBC connector for database connectivity which does not send the connection string in a clear text (read easily exploited) method

5.4.2 Cons:

- JSP applications execute slower than all of the above.
- JSP may need to run via more expensive web server applications such as BEA Weblogic.
- JSP applications do not lend themselves well to load balancing or multi-threading while on the MS Windows platform
- JSP applications must be carefully planned to disallow non-parameterized URL scripting execution exploits.

5.5 Summary

ASP.NET in a clustered environment will allow load balancing between multiple machines. This is a plus. ASP.NET is the better choice of the above in most situations.

The fastest choice would be PHP. It is extremely threaded by design, and it can be deployed on multiple operating systems, whereas ASP and ASP.NET are a MS Windows only/mostly product. ASP 3.0 can be run on other operating systems via other third party solutions. The .NET Framework has yet to be deployed to full compatibility and ability to other operating systems; thus ASP.NET will be also a MS Windows solution.

JSP applications, while being robust, are indeed the slowest out of the above. It is, however easily deployable in multiple operating system environments, and Apache TomCat is a rather full-featured, open source web server.

JSP applications do not lend themselves to load balancing too well; however it is very possible. But some portions of Java are not multi-threaded; therefore they will not take advantage of multiple processors or clustered environments.

6.0 VIM Code Analysis

The analysis covered each module within the existing VIM application. The modules are identified in the following table.

VIM Code Analysis		
Tab No.	Work Sheet Description	
Current VIM Technology	Technologies used within Current VIM Application	
Totals	VIM Code Analysis Summary	
Miscellaneous Tasking	VIM DOT.NET Updates	
vim.cd-dscp.com {root)	VIM Code Analysis – Code Directory	
ASAP	VIM Code Analysis – Code Directory	
Administration	VIM Code Analysis	
DD250	VIM Code Analysis	
Error Log	VIM Code Analysis	
Favorites Menu	VIM Code Analysis	
Government Functions	VIM Code Analysis	
Include Files	VIM Code Analysis	
Samms Data Quality	VIM Code Analysis	
Security	VIM Code Analysis	

7.0 QUALITY ASSURANCE

7.1 Performance Testing

- Current Performance Benchmarking In order to ensure that migrating to the .Net framework does not have a negative impact on performance we must benchmark current application performance. In order to perform this analysis the testing team should use the Astra QuickTest automation tool. This tool has a performance module that captures page loading times. At a minimum, each of the following functions need to be recorded and analyzed to capture current system performance:
 - 1. Adding, deleting, and editing data for user identifications
 - 2. Adding, deleting, and editing data for prime contractor and subcontractors/alternate sites
 - 3. Submitting data change requests, processing those requests, and then generating documents from the modified data, including validating the MILSTRIP transactions for each of the classes of changes
 - 4. Starting production for partial and full CLINs
 - 5. Generating DD1155s and DD250s for both manufacturers and bill and hold contractors
 - a) Shipments to depots, self, and retail sites
 - b) Shipments from prime contractors and subcontractors/alternate sites
 - c) Source and destination Inspected
 - d) With and without "in the clear addresses"
 - e) Regular and Direct Vendor Delivery (DVD) orders
 - f) Continental US and overseas shipments including foreign military sales
 - g) Various quantity combinations, including in excess of variance percentages
 - h) Changing various options and repeating some of the above tests
 - Validating MILSTRAP transactions for all the above combinations
 - 6. Preparation of shipment labels for all the above combinations
 - 7. Viewing contract shipments and invoices for all the above combinations
 - 8. Payment tracking for partial and fully paid invoices, including processing DFAS inquiries

- 9. Generation MROs for:
 - a) Shipments to depots and retail sites
 - b) With and without "in the clear addresses"
 - c) Continental US and overseas shipments including foreign military sales
 - d) For the exact quantity and less than and more than quantity requested
 - e) Validating MILSTRIP transactions for all the above combinations
- 10. Entering Verbal/Written manual orders for all the above combinations and processing those orders
- 11. Preparation of shipment labels for all the above combinations
- 12. Processing follow-up inquiries for previously and not yet shipped MROs
- 13. Processing cancellations for previously and not yet shipped MROs
- 14. Generating all reports for all the combinations of the above processing
- NET Performance Benchmarking In order to ensure that migrating to the .Net framework does not have a negative impact on performance we must benchmark the application after the migration to the .NET framework. In order to perform this analysis the testing team should use the Astra QuickTest automation tool. This tool has a performance module that captures page loading times. At a minimum, each of the following functions need to be recorded and analyzed to capture current system performance:
 - 1. Adding, deleting, and editing data for user identifications
 - 2. Adding, deleting, and editing data for prime contractor and subcontractors/alternate sites
 - 3. Submitting data change requests, processing those requests, and then generating documents from the modified data, including validating the MILSTRIP transactions for each of the classes of changes
 - 4. Starting production for partial and full CLINs
 - 5. Generating DD1155s and DD250s for both manufacturers and bill and hold contractors
 - a) Shipments to depots, self, and retail sites
 - b) Shipments from prime contractors and subcontractors/alternate sites
 - c) Source and destination Inspected
 - d) With and without "in the clear addresses"
 - e) Regular and Direct Vendor Delivery (DVD) orders

- f) Continental US and overseas shipments including foreign military sales
- g) Various quantity combinations, including in excess of variance percentages
- h) Changing various options and repeating some of the above tests
- Validating MILSTRAP transactions for all the above combinations
- 6. Preparation of shipment labels for all the above combinations
- 7. Viewing contract shipments and invoices for all the above combinations
- 8. Payment tracking for partial and fully paid invoices, including processing DFAS inquiries
- 9. Generation MROs for:
 - a) Shipments to depots and retail sites
 - b) With and without "in the clear addresses"
 - c) Continental US and overseas shipments including foreign military sales
 - d) For the exact quantity and less than and more than quantity requested
 - e) Validating MILSTRIP transactions for all the above combinations
- 10. Entering Verbal/Written manual orders for all the above combinations and processing those orders
- 11. Preparation of shipment labels for all the above combinations
- 12. Processing follow-up inquiries for previously and not yet shipped MROs
- 13. Processing cancellations for previously and not yet shipped MROs
- 14. Generating all reports for all the combinations of the above processing
- Performance Comparison After we have pre and post .NET performance data, a performance analysis needs to be performed. Migrating to the .NET framework should significantly increase performance; however, some process may initially be negatively impacted. Any finding of such needs to be addressed by the conversion team as the success of the transition will rely heavily on the performance not being impacted negatively.

7.2 Functional Testing

• Test Cases will need to be generated and executed in order to ensure that all functionality is properly tested and that all test data is collected for future

regression testing. The test cases should be executed both before and after the conversion, and the execution should be recorded by the automation tool (QuickTest). The following Test Cases will need to be written and executed by the Quality Assurance team:

ARN-TP-001 – This is the Test Plan document intended to capture and document the testing strategy that the Quality Assurance team at Modulant will employ to accurately test the required functionality of the system being transitioned to the .NET framework. This strategy will be developed in accordance with the overall schedule of the project. As such, any dates mentioned may be subject to change based on changes to the project plan.

System Feature	Description of System Feature	Test Case ID
Adding	g, deleting, and editing data for user iden	tifications
1	Adding data for User ID	ARN-TC-001
1	Deleting data for User ID	ARN-TC-001
1	Editing data for User ID	ARN-TC-001
Adding,	deleting, and editing data for prime cont subcontractors/alternate sites	ractor and
2	Adding data for prime contractor and subcontractors/alternate sites	ARN-TC-002
2	Deleting data for prime contractor and subcontractors/alternate sites	ARN-TC-002
2	Editing data for prime contractor and subcontractors/alternate sites	ARN-TC-002
generating do	lata change requests, processing those recomments from the modified data, including TRIP transactions for each of the classes of	ng validating the
3	Submit data change request	ARN-TC-003
3	Process data change requests	ARN-TC-003
3	Generate documents from modified data	ARN-TC-003
3	Validate the MILSTRIP transactions for each of the classes of changes	ARN-TC-003
S	tarting production for partial and full CI	LINs
4	Start production for partial CLINs	ARN-TC-004
4	Start production for full CLINs	ARN-TC-004

ystem Feature	Description of System Feature	Test Case ID
Generating DD	1155s and DD250s for both manufacturers contractors	s and bill and hold
5	Shipments to depots, self, and retail sites	ARN-TC-005
5	Shipments from prime contractors and subcontractors/alternate sites	ARN-TC-005
5	Source and destination Inspected	ARN-TC-005
5	With and without "in the clear addresses"	ARN-TC-005
5	Regular and Direct Vendor Delivery (DVD) orders.	ARN-TC-005
5	Continental US and overseas shipments including foreign military sales	ARN-TC-005
5	Various quantity combinations, including in excess of variance percentages	ARN-TC-005
5	Changing various options and repeating some of the above tests	ARN-TC-005
5	Validating MILSTRAP transactions for all the above combinations	ARN-TC-005
Preparati	ion of shipment labels for all the below co	mbinations:
6	Shipments to depots, self, and retail sites	ARN-TC-006
6	Shipments from prime contractors and subcontractors/alternate sites	ARN-TC-006
6	Source and destination Inspected	ARN-TC-006
6	With and without "in the clear addresses"	ARN-TC-006
6	Regular and Direct Vendor Delivery (DVD) orders	ARN-TC-006
6	Continental US and overseas shipments including foreign military sales	ARN-TC-006
6	Various quantity combinations, including in excess of variance percentages	ARN-TC-006
6	Changing various options and repeating some of the above tests	ARN-TC-006
6	Validating MILSTRAP transactions for all the above combinations	ARN-TC-006
Viewing contr	act shipments and invoices for all the belo	ow combinations
7	Shipments to depots, self, and retail sites	ARN-TC-007
7	Shipments from prime contractors and	ARN-TC-007

System Feature	Description of System Feature	Test Case ID
	subcontractors/alternate sites	
7	Source and destination Inspected	ARN-TC-007
7	With and without "in the clear addresses"	ARN-TC-007
7	Regular and Direct Vendor Delivery (DVD) orders	ARN-TC-007
7	Continental US and overseas shipments including foreign military sales	ARN-TC-007
7	Various quantity combinations, including in excess of variance percentages	ARN-TC-007
7	Changing various options and repeating some of the above tests	ARN-TC-007
7	Validating MILSTRAP transactions for all the above combinations	ARN-TC-007
Payment track	ing for partial and fully paid invoices, inc DFAS inquiries	luding processing
8	Payment tracking for partially paid invoices	ARN-TC-008
8	Payment tracking for fully paid invoices	ARN-TC-008
8	Processing of DFAS inquiries	ARN-TC-008
	Generation MROs for:	
9	Shipments to depots and retail sites	ARN-TC-009
9	With and without "in the clear addresses"	ARN-TC-009
9	Continental US and overseas shipments including foreign military sales	ARN-TC-009
9	For the exact quantity and less than and more than quantity requested	ARN-TC-009
9	Validating MILSTRIP transactions for all the above combinations	ARN-TC-009
Entering Verba	I/Written manual orders for all the below processing those orders	combinations and
10	Shipments to depots and retail sites	ARN-TC-010
10	With and without "in the clear addresses"	ARN-TC-010
10	Continental US and overseas shipments including foreign military sales	ARN-TC-010
10	For the exact quantity and less than and	ARN-TC-010

System Feature	Description of System Feature	Test Case ID
	more than quantity requested	
10	Validating MILSTRIP transactions for all the above combinations	ARN-TC-010
Preparat	ion of shipment labels for all the below co	mbinations
11	Shipments to depots and retail sites	ARN-TC-011
11	With and without "in the clear addresses"	ARN-TC-011
11	Continental US and overseas shipments including foreign military sales	ARN-TC-011
11	For the exact quantity and less than and more than quantity requested	ARN-TC-011
11	Validating MILSTRIP transactions for all the above combinations	ARN-TC-011
Processing foll	low-up inquiries for previously and not ye	t shipped MROs
12	Processing follow-up inquiries for previously shipped MROs	ARN-TC-012
12	Processing follow-up inquiries for not yet shipped MROs	ARN-TC-012
Processing	cancellations for previously and not yet sh	nipped MROs
13	Processing cancellations for previously shipped MROs	ARN-TC-013
13	Processing cancellations for not yet shipped MROs	ARN-TC-013
Generating a	ll reports for all the combinations of the a	bove processing
14	Generation reports for processing follow- up inquiries for previously shipped MROs	ARN-TC-014
14	Generation reports for processing follow- up inquiries for not yet shipped MROs	ARN-TC-014
14	Generation reports for processing cancellations for previously shipped MROs	ARN-TC-014
14	Generation reports for processing cancellations for not yet shipped MROs	ARN-TC-014

7.3 Automation Test

- Astra QuickTest Astra QuickTest should be used to generate and execute the
 automation scripts for the transition to .NET. QuickTest not only allows for
 repetitious testing of systems with a web-based user interface, it also allows you
 to capture your test data for regression test of future releases.
- Pre-conversion Script Generation For each test case defined above, a
 corresponding automation script should be generated as the test case is executed.
 This will allow the scripts to be executed post-conversion with the same, valid
 data.
- Post-conversion Script Execution Each automation script that is generated in the
 pre-conversion test should to be executed post-conversion. With the conversion to
 .NET there will be some inherent UI changes that will cause the scripts to initially
 fail; however, this will be very helpful as it will inform us of all the changes to the
 UI that need to be documented and relayed to the customer.
- Sample Script Below is a sample script that is created using QuickTest. The language is VB Script.

```
Services.StartTransaction "Login"
Browser("Login").Page("Login").WebEdit("txtUserID").Set "admin"
Browser("Login").Page("Login").WebEdit("txtPassword").SetSecure
"3d19e8f7cae12bafb1"
Browser("Login").Page("Login").WebButton("Logon").Click
Browser("Login").Page("PRIDE - Product").Check CheckPoint("PRIDE -
Product")
Browser("Login").Page("PRIDE - Product").Link("- Query Search").Click
Browser("Login").Dialog("Microsoft Internet").WinButton("OK").Click
Browser("Login").Page("PRIDE - Product_2").Check CheckPoint("PRIDE -
Product_2")
Browser("Login").Page("PRIDE - Product_2").Link("- Create Query").Click
Browser("Login").Page("CreateQuery").WebEdit("QueryNameTextBox").Set
DataTable("QueryNameTextBox_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("DocumentNumberTextBo").Se
t RandomNumber(0,1000)
Browser("Login").Page("CreateQuery").WebEdit("DocumentNumberTextBo").Ou
tput CheckPoint("DocumentNumberTextBo")
Browser("Login").Page("CreateQuery").WebEdit("DocumentTypeTextBox").Set
"Revision '
Browser("Login").Page("CreateQuery").WebEdit("DocumentCageTextBox").Set
DataTable("DocumentNumberTextBo_value_out", dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("DocumentRevisionText").Se
t DataTable("DocumentRevisionText_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("DocumentTitleTextBox").Se
t DataTable("DocumentTitleTextBox_Text", dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("PartNumberTextBox").Set
DataTable("PartNumberTextBox_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("PartCageTextBox").Set
DataTable("PartCageTextBox_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("NSNTextBox").Set
```

```
DataTable("NSNTextBox_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("NIINTextBox").Set
DataTable("NIINTextBox_Text",dtGlobalSheet)
Browser("Login").Page("CreateQuery").WebEdit("StatusTextBox").Set
"Stocked"
Browser("Login").Page("CreateQuery").WebButton("Save Query Data").Click
Services.EndTransaction "Login"
```

7.4 Issue Management

Elementool – Issue management will be very important in the .NET conversion process. Elementool is a web-based issue tracking solution that allows both internal and external access to issues via a secure web service. This has already been implemented with high levels of success at Modulant. Each time an internal issue is found, it will need to be documented, fixed, retested, and then closed upon validation. The same methodology should hold true for external issues found by the customer. If the customers find an issue, they need to be able to log and track the issue.

8.0 CONCLUSION

8.1 Benefits

As summarized in section 5.5 and restated here, ASP.NET in a clustered environment will allow load balancing between multiple machines, and better choice of the above in most situations.

ASP.NET was developed to make it much easier to develop dynamic, scalable Web applications. ASP was easy to use and made the creation of dynamic Web content easy, but as the complexity of the dynamic content increased, the code necessary to enable complex pages became unmanageable. ASP.NET simplifies the creation of complex pages by providing pre-built server-side controls and object types that Web developers can use much like the drag-and-drop controls that Windows developers use to develop Windows desktop applications.

ASP.NET is highly extendible. New object types and custom server controls can be created in any .NET CLS-compliant programming language. The code-behind development model allows developers to create just about any functionality, compile it into a dll library and import it into a Web page. See the topics Introduction to Web Forms Pages and Developing ASP.NET Server Controls.

ASP.NET is built around an extensible architecture known as the HTTP runtime. The runtime handles requests and delivers responses. The runtime is designed like an execution pipeline where any number of components can be daisy-chained together. HTTP modules and HTTP filters are components that can be added to the pipeline to customize the request/response chain of events.

8.2 Migration Factors and Risks

The migration factors and associated risks involved with moving from the present ASP to a .NET environment are described below.

The major migration factor is the training of developers and their understanding of the .NET framework. Of minor concern are the inherent risks of newly released product from Microsoft in regards to security and stability, and costs relating to training, support and procurement of these new technologies.

Migration risks are the generation of code bugs due to rewrite of some code required to take advantage of the .NET framework.

These migration factors and risks can be effectively managed and not pose any serious threat to converting to a .NET framework.

Appendix C

VIM-ASAP v2.1 Users Manual

Virtual Item Manager ARN Supply-chain Automated Processing

VIM-ASAP v2.1 User's Manual

(Rev. F)

Prepared for:

Apparel Research Network Program
Defense Logistics Agency (DLA)
and
Defense Supply Center Philadelphia (DSCP)



Prepared by:

MODULANT Interoperability Solutions

PDIT, Inc. DBA Modulant 444 West Ocean Blvd., Suite 620 Long Beach, CA 90802-4500 Phone: (562) 495-6500 Fax: (562) 495-6509

vim-asap@ct-dscp.com http://vim.ct-dscp.com

March 29, 2004

Table of Contents

1	Intro	duction	
	1.1	Computer Requirements and Internet Connection	3
	1.2	Acquiring and Learning How to Use a Browser	3
	1.3	User Identifications and Passwords	4
	1.4	Login and Use of VIM-ASAP	4
2	101	D. A description	7
2		P Administration	
	2.1		
	2.2	Administer DD250 Data	
	2.3	Administer Various Options	
	2.4	Submit Data Change Request	
	2.5	Adjust Cut Quantity and Finished Goods	
	2.6	Add/Delete NSN	12
3	Manu	ifacture Garments	14
	3.1	Generate DD1155	14
	3.2	Process Contracts/Orders – Start Production	16
	3.3	Print Carton Labels	18
	3.4	Prepare DD250s	
	3.5	View/Edit Existing DD250s	
	3.6	Prepare Shipment Labels	
	3.7	View Existing Shipment/Container Labels	
4		age Depot Operations	
	4.1	Review Orders and Generate MROs	
	4.2	Process Verbal/Written Orders	
	4.3	Print Unshipped MROs	
	4.4	Prepare Shipment Labels	
	4.5	View Existing Shipment/Container Labels	
	4.6	Review and Reply to Follow-Up Inquiries	36
5	Repo	rts	37
	5.1	View Contract Shipments and Invoices	37
	5.2	Track DD250 Payments	
	5.3	Inventory Count	
	5.4	Requisition Shipment Tracking	
	5.5	Shipped Requisitions	
	5.6	Active Contracts	
Ap	pendi		48
		Setting Up a New DFAS Account	
		Obtaining Production Approval	
	A-3.	Monitor Status of DFAS Payments	,50
Ar	pendi	Registration for Electronic Transmission of DD250s Using WAWF-RA	54
-1		Self Registration for WAWF-RA	
	B-2.	Registration for Electronic Transmission of DD250s Using WAWF-RA	57

Index of Figures

Figure 1 – Login	4
Figure 2 – First Page After Login Menu	5
Figure 3 – ASAP Administration Menu	6
Figure 4 – Manufacture Garments Menu	
Figure 5 – Manage Depot Operations Menu	6
Figure 6 – Reports Menu	
Figure 7 – Administer ASAP Users Web Page	7
Figure 8 – Administer DD250 Data Web Page	
Figure 9 – Administer DD250 Data Web Page – Detail Page	9
Figure 10 – Administer Various Options Web Page	10
Figure 11 - Submit Data Change Request Options	11
Figure 12 - Submit Data Change Request Results	
Figure 13 – Adjust Cut Quantity and Finished Goods Counts	12
Figure 14 – Add/Delete NSN	
Figure 15 – Generate DD1155 Web Page	14
Figure 16 – Controls for DD1155 Form	15
Figure 17 – Sample Two Sheet DD Form 1155	16
Figure 18 – Process Contracts/Orders – Start Production Web Page	17
Figure 19 - Print Carton Labels	
Figure 20 – Top-Half of Prepare DD250s Web Page	
Figure 21 – Bottom-Half of Prepare DD250s Web Page	
Figure 22 – Sample DD250 and Container Label Sheets	22
Figure 23 – Control Buttons at Top of DD250 and Container Labels	22
Figure 24 – View/Edit Existing DD250s Web Page	
Figure 25 – Prepare Shipment Labels Web Page	
Figure 26 – New Window for Shipment Labels	
Figure 27 – List for Shipment Labels	
Figure 28 – View Existing Shipments Labels Web Page	
Figure 29 – Review Orders and Generate MROs Web Page	
Figure 30 – MRO Form Window	
Figure 31 – MRO List Window	29
Figure 32 – Process Verbal/Written Orders Web Page	
Figure 33 – Prepare Shipment Labels Web Page	
Figure 34 – Top Half of Prepare Shipment Labels Web Page	
Figure 35 – Bottom Half of Prepare Shipment Labels Web Page	
Figure 36 – Small Window for Editing Container Information	
Figure 37 – New Window for Shipping Forms	
Figure 38 – New Window for Container Forms	35
Figure 39 – New Window for List	
Figure 40 – View Existing Shipment/Container Labels Web Page	
Figure 41 – Review and Reply to Follow-Up Inquiries Web Page	36

Figure 42 – View Contract Shipments and Invoices Web Page	37
Figure 43 - Track DD250 Payments Page	
Figure 44 - Sorting the Data on the Track DD250 Payments Page	
Figure 45 - DFAS Detail and Inquiry Section of Track DD20 Payments Page	
Figure 46 – DFAS Detail Web Page for a Single DD250	
Figure 47 – Inventory Count Printing Page	44
Figure 48 – Requisition Status Page	
Figure 49 – Shipped Requisitions Page	46
Figure 50 – Active Contracts Page	
Index of Tables	
Table 1 – Process Verbal/Written Orders Data Fields	30
Table 2 – View Contract Shipments and Invoices Column Headings	
Table 3 – View Contract Shipments and Invoices Row Headings	
Table 4 – Track DD250 Data Fields and Sources	
Table 5 – DFAS Detailed Invoice Data Sources	

1 Introduction

The ARN Supply-chain Automated Processing (ASAP) system is a collection of Internet-based functions that have been designed to support enhanced visibility, reliability, and document and data consistency between defense apparel manufacturers, DFAS, and the personnel at DSCP who are responsible for managing inventory levels, issuing contracts and requisitions, and monitoring related activities. ASAP is a part of the total DSCP managed system called VIM (Virtual Item Manager) that provides DSCP with a collection of functions to support their management of the total apparel supply chain.

VIM-ASAP accomplishes these things by providing web pages for each manufacturer to start production of selected contracts, create DD250s when the items are ready for shipment, and transmit electronic DD250s to DFAS as well as to your QARs for electronic approval via WAWF-RA. The system can print all of the shipping and container labels that are required when making a shipment. For those manufacturers who are bill and hold contractors, the system also generates MILSTRAP transactions (D4S) as well as all of the documents and MILSTRIP transactions that are required for the operation of a depot. Most of the information required, like contract numbers and ship-to addresses, have been extracted from a collection of DSCP, DLA, DLIS, DAASC, and DFAS databases and inserted in the appropriate locations on the web pages. This means that users need only make minimal entries of variable data, e.g., quantity shipped for each CLIN.

Terms You Should Know

- Click means that you should depress the left mouse button once after positioning the mouse cursor over a specific point.
- Cut Quantity is used to identify those NSNs that have gone from a status of on-order (the contract has been issued) with the manufacturer into the production process. It is that point in time where DSCP can no longer issue a modification that does not have a significant impact on the manufacturer.
- Finished Goods (FG) Quantity is reserved for manufacturer owned items for which no current contract exists for the NSNs. These may be items that we manufactured a "at risk" in anticipation of a contract or excess items that may have been left over from a prior contract where the completed quantity exceeded the permissible variance. FG items can be seen by DSCP personnel and can be used to fill requirements for future orders.
- **PGC** (**Product Group Code**): A five digit code that is used by DSCP to identify all NSNs that belong to a specific garment family or commodity, e.g., all sizes of shirts made from the same fabric and style are assigned to a single PGC. You will see the PGC whenever you are addressing any of the NSNs that you are producing.

Key Points Graphics

The following symbols have been incorporated into this User's Manual to call attention to key points or tasks:



Helpful suggestions or tips are prefaced with a light bulb icon. These suggestions may not be required, but should make your use of VIM-ASAP easier and/or more productive. These points or suggestions are recommended.



Cautions are indicated with an orange "Caution" sign, and are included next to tasks or items that could cause problems if not accomplished per the directions.

This document is organized into the following sections:

- 1. <u>Computer Requirements and Internet Connection</u>: Defines what each contractor needs to do to establish a connection to the Internet.
- 2. Acquiring and Learning How to Use a Browser: Users need to know how to use a browser.
- 3. <u>User Identification and Passwords</u>: Explains how to login to VIM-ASAP.
- Login and Use of VIM-ASAP: Explains how to initially login and begin using VIM-ASAP:
- 5. <u>ASAP Administration</u>: The Administration web functions provide controls for each contractor over who can review and update their web pages. These functions also permit each contractor to identify alternate production sites, to authorize the VIM-ASAP program to transmit electronic DD250s to DFA\$, to initialize data for the DD250, and control over a number of other options.
- 6. <u>Manufacture Garments</u>: The manufacturing functions provide access to new and updated contracts and delivery orders, the identification of CLINs that have been cut, the preparation of DD Form 250s and all shipping documents, and the transmission of electronic invoices to DFAS and QARs as well as MILSTRAP transactions for bill and hold contractors.
- 7. <u>Manage Depot Operations</u>: The depot operations functions provide access to new and updated requisitions (a.k.a. MROs) and follow-up inquiries, prints all of the required forms and shipping documents, permits the entry of phone or faxed orders, and generates all of the required MILSTRIP transactions.
- 8. Reports: This section shows primarily "read only" reports such as contract shipment and invoice data, payment data, and requisition status.

1.1 Computer Requirements and Internet Connection

The minimal configuration for a computer required to access the Internet and use VIM-ASAP varies as a function of the operating system, but needs to be able to utilize at least Microsoft's **Internet Explorer version 6.0**. If you encounter slow performance, you may need to add RAM or get a faster connection to the Internet. There are too many variables of operating system, processor speed, and RAM to make a specific system recommendation. As a starting point, you should check Microsoft's minimum system requirements for the version of Internet Explorer that you have installed. You will also need an ink-jet or laser printer for printing the forms and bar codes produced by VIM-ASAP.

There are a large number of options for establishing an Internet connection. Costs start at roughly \$10 per month for a dial-up service that works with each individual's computer modem. This is a perfectly acceptable setup as long as your computer's modem is at least 56 kbs. Highend performance options can cost as much as \$1,500 per month, but these are only necessary for very high volume multi-user environments. There are also many options in between these two. Your initial connection can be focused on the very acceptable low-end, but make sure that the provider has a local number that is not frequently busy. If you get poor service from one provider you can easily switch to another until you get a good level of service.

The search for a good Internet provider should start with recommendations from local friends. If you do not know anyone with Internet experience, look in the yellow pages under "Internet" to find a local provider. Any Internet service provider will supply you with a start-up kit and technical support if you have any communications problems.

1.2 Acquiring and Learning How to Use a Browser

A browser is a program that permits each user to navigate their way around the Internet. There are several different brands of Browsers. The two most common ones are Microsoft's Internet Explorer (IE) and Netscape's Navigator. At this time Netscape's browser is not capable of properly handling a number of functions so you will need to use IE for VIM-ASAP.

In recent years, nearly every computer is purchased with a browser already installed. If IE is already installed, use its "Help" menu to check the "About Internet Explorer" option. Make sure that it is at least version 6.0. If you need to acquire an updated version of IE, use your existing Browser to access the indicated Web site for a free download of the IE software at: http://www.microsoft.com/windows/ie/.

Before you use VIM-ASAP for the first time, you should become familiar with the use of your Browser. VIM-ASAP utilizes many of the standard methods that you will find on nearly all Web pages, such as pull-down lists. You should not use the enter button and instead click on the appropriate action button. Browsers can get confused about what the enter button is being used for. There are also books that you can read, but you will also need to sit and use the browser for a few hours before you will become familiar enough to begin using VIM-ASAP.



There is a useful Configuration Utility available at http://info.ct-dscp.com that will set up your browser for you automatically. Once you click the link on the Installer page you will be prompted to open the ARN Settings program. This will add the VIM-ASAP website to your list of Trusted Sites, adjust your security settings accordingly, and also adjust your browser's print margins so that documents will print correctly.

1.3 User Identifications and Passwords

A default user ID and password are established for each manufacturer and are provided to the manufacturer's point of contact that will be serving as the ASAP Administrator. No one can update or access a manufacturer's individual VIM-ASAP web pages without being authorized by the specific manufacturer. Access is managed through the use of user IDs and passwords that are controlled by each manufacturer through their Administration functions.

If you have misplaced your password or have any other problems, call the VIM-ASAP Help Desk at 1-888-940-7348. The help desk is open from 7a.m. to 4p.m. (Pacific Time), Mondays through Fridays, except Holidays. You may leave a voice mail message at any time and help desk personnel will return your call as soon as possible.

A test site for version 2.1 with demonstration data has been established for each user to practice using the system the first time. Use this demo site until you have learned how to work with the system. The login and password are both "demo." The address is: http://vim.ct-dscp.com (the same as the production site). In the demo site, you may perform all of the functions without changing any production data or transmitting data to any external organization. You can make mistakes that will not cause any problems. The demo site does not contain any requisitions though, so you will not see the depot operations.

1.4 Login and Use of VIM-ASAP

When you are ready to start using VIM-ASAP, go to http://vim.ct-dscp.com to access the web site and enter your user identification and password (see Figure 1). Additional authorized users may be created by each manufacturer's system administrator by following the instructions contained in Section 2.1.



Figure 1 - Login

After logging in, the first level of the menu will appear in the upper left-hand corner of your screen (see Figure 2). Click each menu folder to get access to the lower level functions. The administrator of an apparel manufacturer will see two clusters of functions titled "ASAP Administration" and "Manufacturer Garments". A bill and hold contractor will see a third cluster of functions called "Manage Depot Operations". All users will also see a folder labeled "Reports" right above the Exit link.

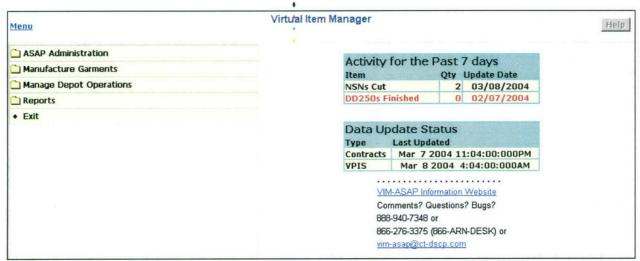


Figure 2 – First Page After Login Menu

The right half of the screen is used to display usage statistics and contact information. "Activity for the Past 7 days" shows a cumulative total of activities over the last week. Items identified in Red font are items that are outside the range of normal operations (e.g., no activity, DFAS or DSCP data not received in the last 24 hours). The "Data Update Status" lists the last update date and time for the most recent update of the database for contract and MRO data from DSCP as well as for VPIS data from DFAS. A direct link to the VIM-ASAP Information Website (http://info.ct-dscp.com) is included, along with support phone numbers and an email link. The Information website is where the answers to many Frequently Asked Questions may be found. The current version of this User Manual will also be available there, annotated with the date of the most recent update. Additionally, a Configuration Utility is available on the Installer page. This utility will automatically adjust a user's browser settings to properly set their print margins and security settings.

The functions available in each menu area are shown in Figure 3 through Figure 6. Simply click on the folder to reveal the menu items in that group of functions, then click on the item with the black dot in front of it to activate the desired function.

ASAP Administration Administer ASAP Users Administer DD250 Data Administer Various Options Submit Data Change Request Adjust Cut Qty and Finished Goods Counts Add/Delete NSN

Figure 3 - ASAP Administration Menu

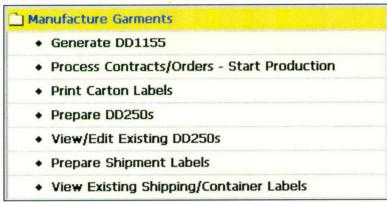


Figure 4 – Manufacture Garments Menu

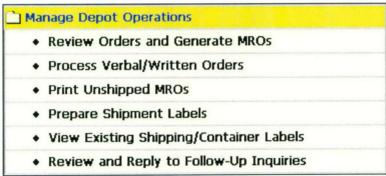


Figure 5 - Manage Depot Operations Menu

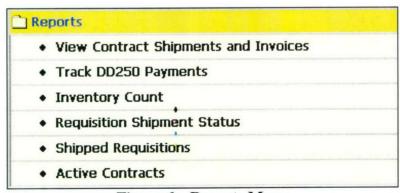


Figure 6 - Reports Menu

2 ASAP Administration

This collection of functions are used to periodically set options and enter data that does not change from day to day, such as the boilerplate data for Block 23 of the DD250, permission to transmit invoice data to DFAS, adding new users, etc. The following subsections explain how to use each of the administration functions.

2.1 Administer ASAP Users

Each company uses the Administer ASAP Users function (see Figure 7) to control its own users and what group of functions they will be permitted to access. All users that are created with this function are assigned to the CAGE of the user that is logged in. Each user's identification must be unique across all VIM-ASAP users so that each user is associated with the proper CAGE when they login. If duplicate user identification is selected, the update will be stopped and a message displayed which points out the problem. The set of functions that each user is able to access is controlled by selecting the desired type of user (e.g., an "ASAP Manufacturer" can only perform manufacturing related functions). For security reasons, a user with administrative controls cannot change their own user type. All of the fields need to be completed before the user data can be updated. E-Mail addresses and phone numbers will be used to contact users if there is a need to contact someone directly.

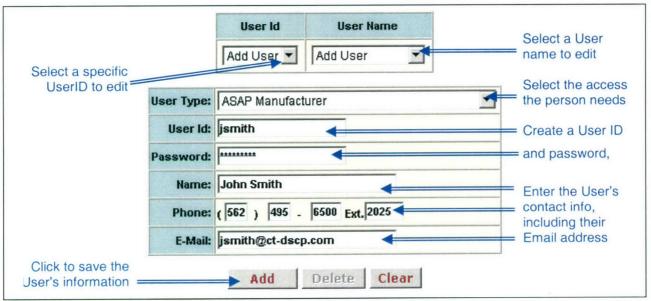


Figure 7 – Administer ASAP Users Web Page

2.2 Administer DD250 Data

The "Administer DD250 Data" function (see Figure 8) is used to identify shipment prefixes, CAGEs of alternate ship-from sites, and boilerplate information for blocks 21a of 23 of the

DD250. These CAGEs are only a list of candidates that may do shipping. The actual shipping site is selected when the DD250 is prepared.

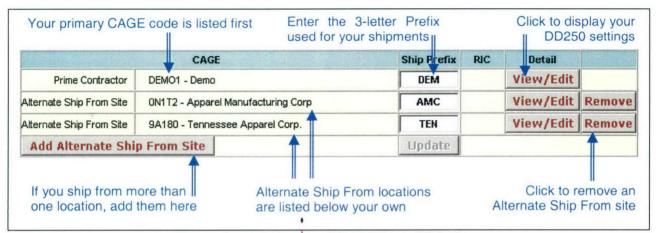


Figure 8 – Administer DD250 Data Web Page

This page is viewed as two separate, but related sections. The top section (see Figure 8) provides for the initial entry and subsequent editing of shipment prefixes (the first three letters of your shipment number) and the CAGEs of alternate manufacturing sites that can be responsible for shipments. RICs for bill and hold contractors are displayed as well but are not editable. Each shipping site must have its own CAGE and three-character shipment prefix.

The name and address of each manufacturer is taken from a DLIS database of CAGE code data. The data can be verified online at http://www.gidm.dlis.dla.mil/bincs/begin_search.asp. If necessary, corrections can be made by emailing dlis-support@dlis.dla.mil or calling toll-free 1-888-352-9333.

Manufacturers submitting DD250s to WAWF-RA will also need to ensure that they are registered in the Central Contractor Registry (CCR), and that their information – including an Electronic Business Point of Contact (EBPOC) – is correct and up-to-date. We always recommend that there be two EBPOCs – a primary and a (different) secondary contact. If your listing has been registered for less than a month we may not yet have it in VIM. You can look up your CAGE at http://www.ccr.gov.

A CAGE for an alternate "Ship From" location can be removed by checking the "Remove" button next to it. To View or Edit the boilerplate data for blocks 21 and 23 of the DD250, simply click the "View/Edit" button corresponding to the desired CAGE. The bottom half of the page then appears with fields for the DD250 data.

This bottom half of the page (see Figure 9) is used to enter boilerplate data for blocks 21a and 23 of the DD250. Each of the CAGEs identified in the top-half of the web page has its own data entry fields for each of the two blocks on the DD250, since each can have its own QAR and comments in block 23 of the DD250. The "Update Template" button needs to be clicked once the data entry is complete. If this is not done, the database is not updated and the data you have entered will disappear. The data that is updated here will appear in the appropriate block as

default data whenever a DD250 is generated, but can be edited at print time if needed. Only the Address Line 2 field and the Block 23 Comment field are optional, all other fields must be filled.

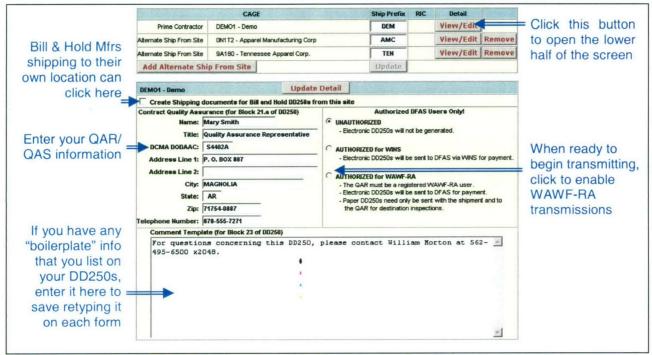


Figure 9 - Administer DD250 Data Web Page - Detail Page

The DFAS transmission function on this screen is used whenever a manufacturer wants to initialize or change the authorization for VIM-ASAP to transmit an electronic version of the DD250. The default setting is "UNAUTHORIZED" whenever a new manufacturer begins using VIM-ASAP.

To change your status if you have set up a WInS account:

- Click the small circle in front of "AUTHORIZED for WINS".
- Click the "Update Detail" button after the black dot has been moved to the desired location.

Please note that the WInS system will reportedly be discontinued in the future. DCMA is encouraging vendors to use the Wide Area Work Flow – Receipt and Acceptance (WAWF-RA) system.

To change your status if you have set up a WAWF-RA account (allowing electronic approval of DD250s by your QAR/QAS):

- Click the small circle in front of "AUTHORIZED for WAWF-RA." The black dot will move to the new location and a text input box will appear to the right.
- If you receive an error, please contact vim-asap@ct-dscp.com for assistance.
- Click the "Update Detail" button at the bottom of the screen.

Once authorized, VIM-ASAP will automatically transmit whenever the "Finish" button is clicked at the top of a DD250 (see Section 3.3). If a user has established a WAWF-RA account, an electronic copy of the DD250s will be routed to the QAR's office first for acceptance. Once accepted, the invoice is then routed to DFAS. Destination Acceptance invoices are routed straight to DFAS, as no QAR approval is required. Each manufacturer must acquire a user name and password from DFAS before transmitting production electronic DD250s through the WInS system. This process is explained in Appendix A of this User's Manual. Information about registering for WAWF-RA may be found at https://wawf.eb.mil/, and the process for applying for a WAWF account is illustrated in Appendix B of this manual.

2.3 Administer Various Options

Each manufacturer has control over three options that alter control of what VIM-ASAP does when the system is used.

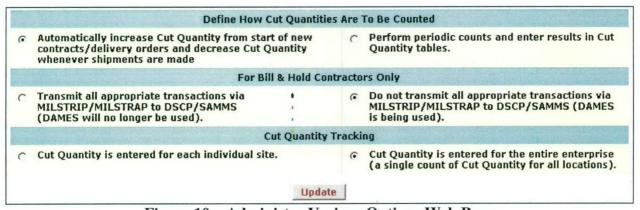


Figure 10 - Administer Various Options Web Page

- 1. Each manufacturer can choose to either let the system ① automatically increase the cut quantity whenever a CLIN is started into production (see Section 3.1) and automatically decrease the cut quantity whenever a shipment is made (see Section 3.3); or ② periodically enter the data manually using the function explained in Section 2.4. The first option is preferred since it provides the manufacturer and DSCP with more timely information. The second option may be more effective for those manufacturers who have an internal production control system that permits them to download their cutting data on a regular basis.
- 2. Each Bill & Hold contractor has the option to either ① permit VIM-ASAP to create and transmit all pertinent MILSTRAP and MILSTRIP transactions when specific functions are performed; or ② continue to use DAMES to create all of the transactions. VIM-ASAP essentially replaces DAMES, so most manufacturers prefer to use the transmit option. As this function is effectively an "On/Off" switch, setting this option to "Transmit" will begin to transmit MILSTRIP/MILSTRAP transactions.
- 3. Each manufacturer who does manufacturing and shipping from various sites (see how alternate sites are identified in Section 2.1) can choose to ① keep track of their cut quantities as a single number that is aggregated from all sites; or ② keep track of each site separately

and then be able to view the data by site or aggregated. If you have no alternate Ship From sites you would want to use the default option (with a single count).

Be sure to click the "UPDATE" button when you are finished setting your various options.

2.4 Submit Data Change Request

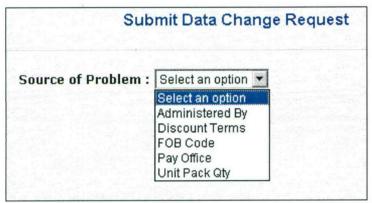


Figure 11 - Submit Data Change Request Options

Upon reviewing the DD1155 data, if a manufacturer finds any discrepancies between the digital data presented in VIM-ASAP and their paper contract, or if any of the data does not appear to be correct, a Data Change Request can be submitted to DSCP (see Figure 11). If appropriate, DSCP can then either correct the electronic data or modify the paper contract at their discretion. The elements of the contract that can be changed include the Administered By code, Discount Terms, FOB Code,

Pay Office DoDAAC, or Unit Pack Quantity (which would update the National Inventory Record of the particular NSN). An example of submitted requests and their results is illustrated in Figure 12 below. The request is routed to the Item Manager or Contracting Officer for review and approval or rejection. If approved, VIM-ASAP is updated immediately on SAMMS or MOCAS contracts. Items under the BSM system require additional follow-up. The request originator will receive an Email from VIM-ASAP advising them of the status, whether accepted or rejected.

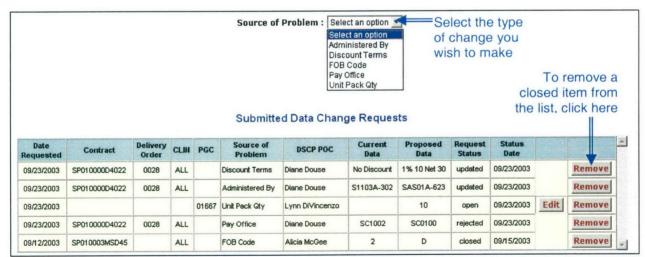


Figure 12 - Submit Data Change Request Results

2.5 Adjust Cut Quantity and Finished Goods

Each manufacturer can use this function (see Figure 13) to either ① keep their quantities current if they chose to manually update their quantities (see Section 2.3); or ② periodically adjust their quantities to account for quality rejection rates that cause more or less items to be satisfactorily completed. Cut quantities are those that have been started into the production process. This is an important point for DSCP as it defines quantities that should not be included in any modification plans. Finished goods quantities include only manufacturer owned items that were either built "at risk" or excess quantities that exceeded permissible variance percentage and reverted to manufacturer owned. These can be used on subsequent orders when they are moved from manufacturer owned to DLA owned. The quantities are updated by entering the correct number in the appropriate data entry field and then clicking either of the update buttons.

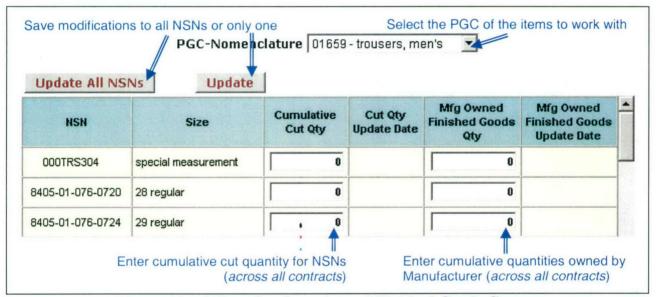


Figure 13 - Adjust Cut Quantity and Finished Goods Counts

It is very important that the finished goods quantities NOT include any bill and hold items held in storage by the manufacturer that have been invoiced via a DD250. These quantities are accounted for by DSCP in their own inventory records from SAMMS, which were updated by the MILSTRAP transactions (D4S) generated by the creation of the DD250. Including them in the finished goods quantities would count them twice.

2.6 Add/Delete NSN

Each VIM-ASAP manufacturer can add or delete NSNs that are not on any of their existing contracts. NSNs that are on existing contracts (see Figure 14) have their Include buttons grayed out so that they cannot be affected. A check mark in the Include column means that the NSN is to be added to the list of items to be tracked. The removal of the check mark deletes the NSN from the lists.

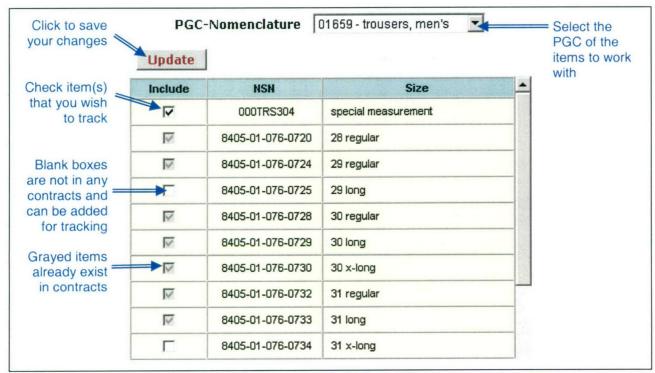


Figure 14 – Add/Delete NSN

3 Manufacture Garments

Each manufacturer has access to the appropriate DSCP data to be able to perform manufacturing functions, from the start of production through the preparation of all invoices and shipping related documents. Electronic transmissions to the appropriate agencies are handled automatically. The following subsections explain how to use each of the manufacturing functions.

3.1 Generate DD1155

Each manufacturer can access, view, and print any DD Form 1155 "Order for Supplies or Services" that they have been issued by DSCP. This is done (see Figure 15) by selecting the desired contract and delivery order and then clicking the "Open Form DD1155" button.

Each manufacturer should use this function to compare their new orders from SAMMS to the paper contract they receive from DSCP. There can be mistakes on either source. Notify your DSCP contracting officer (see the Submit Data Change Request section for the most common errors, Figure 11) if you encounter any discrepancies so that DSCP can either correct the electronic data or issue a paper modification. This will correct any problems well in advance of the use of the data for shipments and invoices. This will also correct the data used by DFAS to make payments for the DD250s. Getting problems corrected at the front end of the process will result in a much improved payment process.

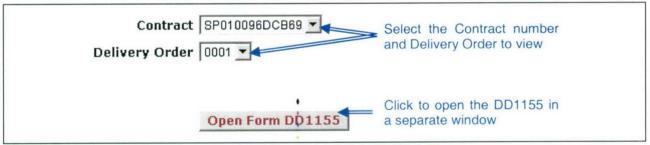


Figure 15 - Generate DD1155 Web Page

The "Open Form DD1155" button will cause a second browser window to be opened that provides control buttons (see Figure 16) to view each sheet of the DD1155 and to print all sheets of the DD115 if desired. Remember to remove the browser's headers and footers and set the margins to 0.25" before printing any forms (see your Browser's Menu under "File" and "Page Setup"); otherwise run the Configuration Utility found at http://info.ct-dscp.com to do this automatically. All forms created by VIM-ASAP will open in a separate browser window. To ensure that all forms print as designed, always use the "Print" button on the web page rather than the button on your browser toolbar.

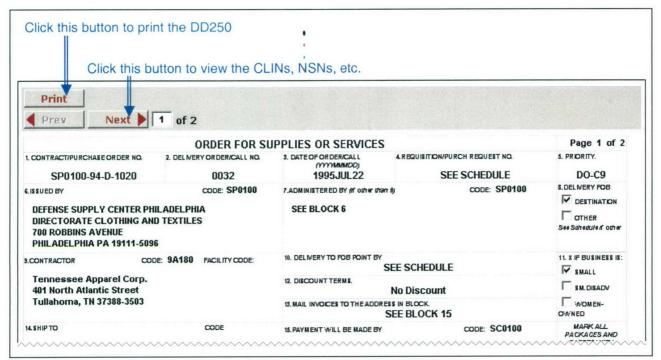


Figure 16 - Controls for DD1155 Form

Each DD1155 will contain at least two sheets (see Figure 17). The first sheet is the cover page of the DD1155 that identifies the contract number, payment office, total order price, etc. The second and subsequent sheets contain a line-by-line listing of all CLINs, their NSN, size, order quantity, unit price, destination DODAAC, and required delivery date along with the Closed Date if any of the CLINs have been closed by DSCP. Any phased delivery data is not available in SAMMS and thus cannot be displayed on the DD1155.

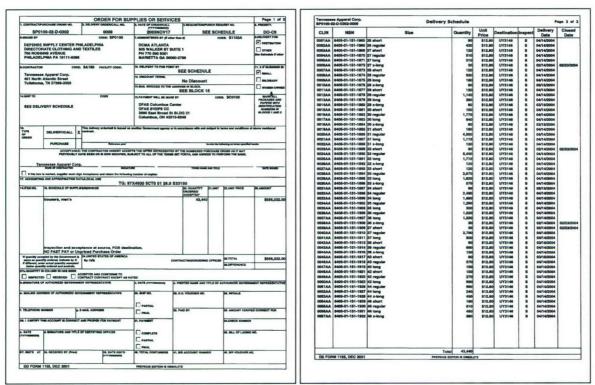


Figure 17 – Sample Two Sheet DD Form 1155

3.2 Process Contracts/Orders – Start Production

Each manufacturer has access to all of its active contracts from DSCP's systems. The "Process Contracts/Orders – Start Production" function is used to call-up specific contracts and to identify the quantities of each CLIN that are being started into the cutting process (see Figure 18). The function is invoked by accepting or changing the data in the "Start Production Qty" column, which always displays the remaining balance of any contract order quantity. Any manufacturer owned Finished Goods (FG) can be included prior to clicking on the "Start" button for each CLIN or the "Start Production on All CLINs" button at the top of the table. Once all items on a particular CLIN have been put into production it will disappear from the screen. If all CLINs have been put into production, the entire Delivery Order (or Contract, if there isn't a specific Delivery Order) will be removed from this queue. The Start Production queue will only display items remaining to be put into production.

This list of orders will probably need to be cleaned-up by each new manufacturer as they begin using VIM-ASAP. There can be old odd quantities that have never been recorded as received even though the manufacturer has been paid for the entire order. This cleanup will need to be done only once, because after the initialization, the system begins using the quantities started as identified by each manufacturer to control this table.

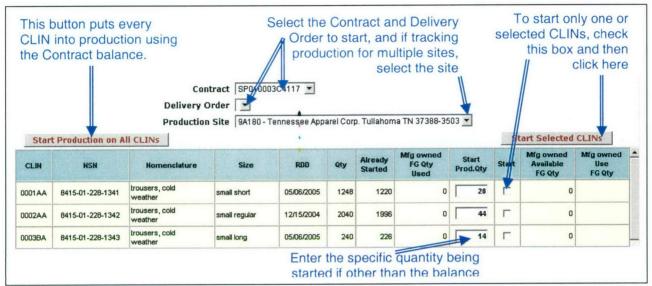


Figure 18 - Process Contracts/Orders - Start Production Web Page

The data can be cleaned-up by turning off the option to automatically count cut quantities (see Section 2.3), starting all quantities into production for those orders the manufacturer knows have been completely started into production, and then turning the automatic counting on again. This will leave the manufacturer with a queue of only open orders where quantities still need to be started into production.

Each of the columns in the table has the following definitions:

- Start: This button is used to start production on one CLIN at a time.
- CLIN: This list contains only CLINs that have remaining quantities on the order that have not yet been started into production. Each CLIN will be automatically removed from this list after the entire order has been started into production.
- NSN, Nomenclature, and Size: These three columns identify the specific garment being ordered.
- **RDD**: The RDD is the required delivery date for each CLIN. This is not related to any phased delivery schedule that may accompany a paper copy of the contract.
- Qty: This is the contract order quantity for each CLIN.
- Already Started: This is the portion of the order that was previously started. Before a manufacturer uses VIM-ASAP for the first time, the quantity is initialized to the quantity shipped as defined by SAMMS. For active orders with recent shipments, this number may be off a little due to the cycle time it takes to get the data updated. Once the system is being used on a regular basis, this number will become both accurate and timely.
- Mfg Owned FG Qty Used: This is a count of manufacturer owned items that were previously allocated to fill some of the quantity ordered for this CLIN.

- Start Production Qty: This column is automatically set to the order "Qty" less the sum of the "Already Started" and "Mfg Owned FG Qty Used". The manufacturer can change the number if the order is being filled incrementally. The "Start Production Qty" should not contain any additions to account for average quality defects. Over time, the pluses and minuses around the average should balance out. If not, each manufacturer can periodically adjust the quantities to account for any variations (see Section 2.4). The quantity entered here will be used to automatically increase the cut quantity if the manufacturer selected that option.
- Mfg Owned Available FG Qty: This is the count for each NSN for those items that each manufacturer entered as manufacturer owned finished goods.
- Mfg Owned Use FG Qty: This is the number entered for each CLIN of those manufacturer owned finished goods that are to be used to satisfy some or all of this order.

3.3 Print Carton Labels

The Print Carton Labels function allows a manufacturer to generate sheets of 10 container labels for an upcoming shipment prior to generating the actual DD250 for the shipment. Although you will still get container labels when you generate the DD250, this function allows a manufacturer to begin labeling their boxes as they are filled from the manufacturing line, rather than later when they are pulling the shipment together. Please note that this feature will not print the specific number of labels needed, as that information is not known prior to generating the DD250. It will generate a full sheet of 10 labels for each NSN, and the user can determine how many labels are needed by specifying the number of sheets/pages from their Windows Print dialog.



Figure 19 - Print Carton Labels

3.4 Prepare DD250s

The fist page of the "Prepare DD250s" web page can be seen in Figure 20 and Figure 21. This function provides each manufacturer with access to all of their open contracts so that DD Form 250s can be prepared in both paper and electronic form and so that container labels can be prepared for attachment to each individual container. The electronic form of the DD250s is automatically transmitted to DFAS if the manufacturer selects that option (see Section 2.2). Nearly all of the data is extracted from DSCP, DLA, DFAS, and DCMA databases. The manufacturers cannot edit any of this data, which means that there can never be an inconsistency between the contract that DSCP creates, the paper DD250 that is signed by the QAR and used as a packing slip, and the data that is transmitted to DFAS; and the data that DFAS uses to authorize payment for invoices. This consistency of data has a very positive impact on the timeliness and effectiveness of the payment process. You may occasionally find differences between your paper contract and DSCP's database data. Either of the sources may be incorrect. You will need to contact your DSCP Point of Contact (POC) to get them to either issue a mod to the paper contract or correct their database. Corrections to the database should show up on your web pages the next morning. There is an overnight process at DSCP and VIM-ASAP to incorporate changes. You can also contact the VIM-ASAP support staff using either the 800number or e-mail address. Both of these appear on the first page of the VIM-ASAP web site.

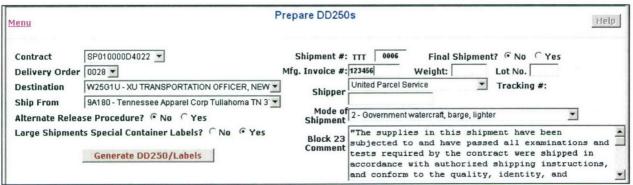


Figure 20 - Top-Half of Prepare DD250s Web Page

The web page for the DD250 can be viewed as two pieces, i.e., the top-half and the bottom-half. The top-half (see Figure 20) is used to enter the basic identification or header information, including the contract number, delivery order number, destination, and ship-from location. Each destination, when there is more than one, has its own set of CLINs because a single CLIN can only be sent to one destination. There can be as many ship-from locations as identified by each manufacturer (see Section 2.1). The header information also contains the shipment number, the final shipment indicator, the manufacturer's invoice number (which must be a unique number), the weight and lot number of the shipment, the shipper and its tracking number, the mode of shipment, the use of an alternate release procedure, and free-form text for block 23 of the DD250. The shipment number is automatically set to the next sequence number for the delivery order, but can be changed by the user to any other unique number. If this is the final shipment for the delivery order, you need to click the "Yes" option.



If you do indicate that this is the final shipment, the current delivery order will no longer appear on the "Prepare DD250s" web page, and will be deleted from SAMMS.

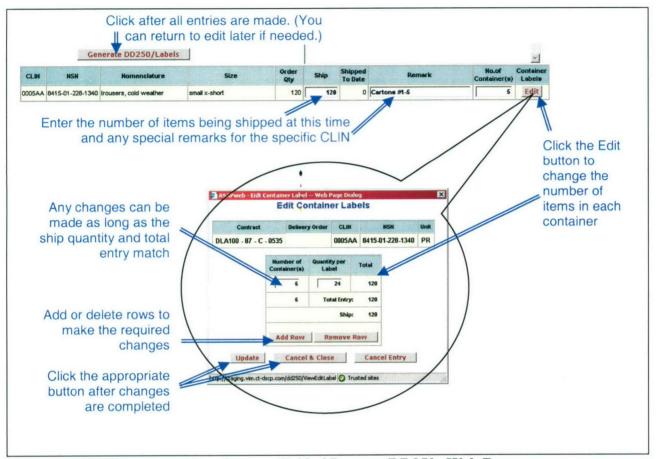


Figure 21 – Bottom-Half of Prepare DD250s Web Page

The option to handle large shipments is located directly above the Generate DD250/Labels button. This option reduces the amount of data required to be downloaded by printing a single page of labels for each NSN. Rather than having to download 20 pages of labels for a shipment of 200 containers, checking "Yes" for this option will allow you to download a single page of labels. You can then control how many copies of that page are printed by using the Print Dialog in Windows, or by running copies of the single page on your office copier.

Your manufacturer's invoice number *must be a unique number* across all contracts and delivery order numbers. This is a tracking number for the payment process - the system will not let you enter a number that already exists in VIM-ASAP (for your contracts). The shipper and its tracking number can be entered here or later when you are preparing the shipping documents. The final entry in the top-half is for freeform comments for block 23 of the DD250. This block is preloaded with the boilerplate created previously (see Section 2.2). The header data entry should

be completed before moving on to the bottom-half of the page because some header data selections will change the bottom-half data.

The bottom-half (see Figure 21) is used to enter the quantity being shipped and any remarks for each CLIN and to edit the number of containers and the quantity in each container. The table contains the following columns:

- CLIN: Only the CLINs that are going to the selected destination are in this list.
- NSN, Nomenclature, and Size: These three columns identify the specific garment.
- Order Qty: This is the contract order quantity for each CLIN. The up or down arrow buttons can be used to move from CLIN to CLIN for each of the order quantities or for each of the number of containers depending on which quantity the user decided to enter.
- Ship: The user enters the quantity being shipped at this time. This number is automatically calculated if the user enters the number of containers first.
- Shipped to Date: This is the quantity for this CLIN was shipped on previous DD250s.
- Remarks: Freeform comments can be added to each CLIN (e.g., 5 boxes, 162 lbs).
- No. of Containers: This number is automatically calculated after the Qty is entered. It is set to the Qty divided by the unit pack. The user can change this number and also edit the number of items in each container. The user is provided with an option to not enter the Qty and instead enter the number of containers first. This causes the Qty to be automatically calculated by multiplying the number of containers by the unit pack.
- Quantity per Label: The quantity per label can be edited as long as the resultant total equals the "Ship" quantity from the prior window.



NOTE: DSCP discourages deviation from the defined Unit Pack.

Click the "Generate DD250/Labels" when ready to prepare the DD250. Once you see the DD250, you can immediately return and edit the data or you may return at a later time to edit and finish the DD250.

A second window will be opened as soon as you click the "Generate DD250/Labels" button. The new window will contain two different types of documents (see Figure 22). The first is the DD250 form and any continuation sheets that may be required if there are too many CLINs for the first sheet. The second type of document includes the number of sheets that are required to display all of the bar coded container labels (Avery Label 5263 4" X 2" – 10 labels per sheet). The DD250 will appear with the word VOID in large red letters. The date shipped will also be missing from block 3. This is done so that it is clear that this is not yet a complete DD250. This document is frequently used as a pick list and for a review by the QAR to make sure that

everything is correct before the DD250 is viewed as complete and accurate. The process for completing the DD250 is explained in the next few paragraphs.

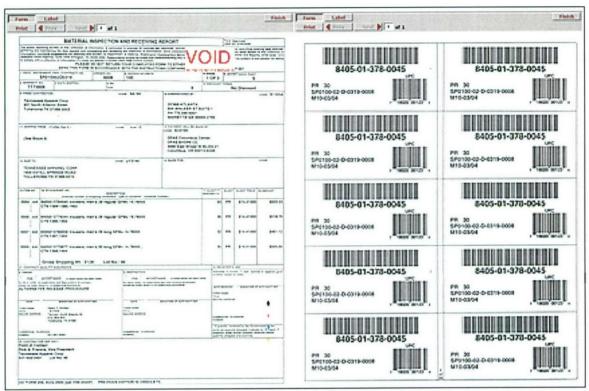


Figure 22 – Sample DD250 and Container Label Sheets

An example of the control buttons at the top of the new window can be seen in Figure 23 where the user can print all pages of the selected document, display all pages of the Form (i.e., DD250), display all pages of the labels, and "Finish" the DD250 which removes the red VOID and inserts today's date as the date shipped in Block 3. The "Finish" button also transmits the invoice to DFAS and creates the MILSTRAP transaction if those options were selected. Each of the buttons is activated by a simple click on the desired button.

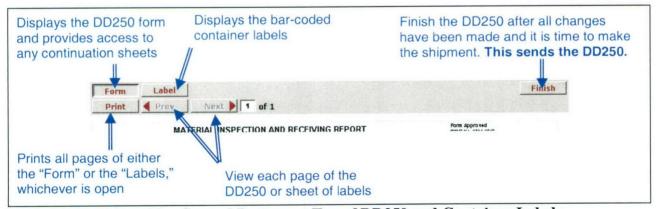


Figure 23 - Control Buttons at Top of DD250 and Container Labels

The "Finish" button is the most important button on the DD250 form page. Once clicked, the DD250 can no longer be edited. If you give VIM-ASAP permission to transmit electronic DD250s to DFAS, the "Finish" button causes the invoice data to be transmitted to DFAS. If you are a bill and hold contractor and you are shipping to yourself, the "Finish" button causes a MILSTRAP transaction (D4S) to be transmitted to DSCP. The "Finish" button also date-stamps these forms and transactions.



Click the "Finish" button only when you want these things to happen. You cannot pull these things back once you have clicked the "Finish" button.

3.5 View/Edit Existing DD250s

The "View/EDIT Existing DD250s" function (see Figure 24) is used to work with any already created DD250, finished or not. Unfinished DD250s can be edited, deleted, or simply recalled and then finished. Finished DD250s can only be viewed. They are permanent and therefore cannot be edited or deleted. Existing DD250s can be viewed by selecting the desired contract and delivery order and then clicking the appropriate button for the desired DD250.



Figure 24 - View/Edit Existing DD250s Web Page

3.6 Prepare Shipment Labels

Every new DD250 is entered into queues of shipments that are organized by ship-from location and destination. The shipping labels (DD Form 1387 "Military Shipment Label") are accessed for one or more shipments (a.k.a., DD250s) by selecting the desired ship-form location and destination (see Figure 25).

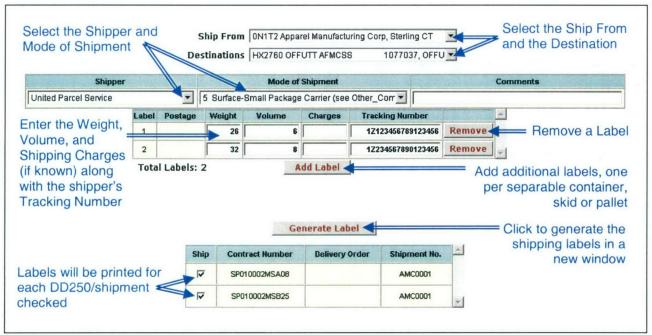


Figure 25 – Prepare Shipment Labels Web Page

Once the appropriate shipment is selected, the user enters data for the following:

- **Shipper**: Use the pull down list to select the appropriate shipper (if you need a shipper added to the list, send an e-mail message to VIM-ASAP to identify the shipper).
- Mode of Shipment: Use the pull-down list to identify the DSCP required code.
- Add Labels: A separate address label is required for each separable package (e.g., a pallet with many containers requires a single shipping label while two pallets require two labels). When the "Add Labels" button is clicked, a new row will appear for the user to enter data for each address label required. NOTE: You may have to scroll through the window to see each line.
- Comment: Any free form comment can be made about the shipment (e.g., pallet ID). The comment will be printed off to the right of the shipment label.
- Postage: The cost of the postage is only entered if the package is sent via the US Postal Service.
- Weight: Enter the weight of all containers for an individual shipment label.
- Volume: Enter the volume (in cubic feet) of all containers that are associated with an individual shipment label.
- Charges: The shipping charges are entered here.
- **Tracking Number**: The tracking number as identified by the selected shipper is entered here.

- Ship: The user can decide which of the DD250s are to be shipped at this time. Click the small box under the Ship column to turn on the option to ship a specific DD250.
- Contract Number: The contract number for the DD250 is displayed here.
- **Delivery Order**: The delivery order number for the DD250 is displayed here.
- Shipment Number: The shipment number for the DD250 is displayed here.

After you are satisfied with all of the data and options, click the "Generate Label" button to create the shipping label. A new window will be opened (see Figure 26) that provides the option to print shipping label(s) as well as a list for all orders that are part of this shipment. The shipping label will have a red VOID stamp on it indicating that it is not yet finished. Clicking on the "Finish" button will remove the VOID as well as indicate the Date Printed on the subsequent "View Existing Shipment/Container Labels" page. (NOTE: The label will no longer be editable once it has been finished.)



Figure 26 - New Window for Shipment Labels

Once you have printed your label you may close the new window. You can then see a "Refresh" button added to the original Prepare Shipping Labels page, and your choices in the drop-down menu boxes are grayed out. To see the remaining data, simply click "Refresh" and your updated items will be displayed that are still awaiting shipping labels.

A sample list is shown in Figure 27. The list identifies all of the DD250s that are part of this shipment, including total counts for all NSNs and a count for the number of containers for each DD250.



Figure 27 - List for Shipment Labels

3.7 View Existing Shipment/Container Labels

Existing shipment and container labels are kept in the database for 10 days following their initial printing. This is done so that lost or damaged documents can be reprinted. They can be recalled (see Figure 28) by first selecting the ship from location and then clicking on the "View" button for the shipment of interest. The TCN (Transportation Control Number) provides a unique identifier for each shipment, but the date of the shipment and its destination is also provided for reference purposes. The "View" button will provide access in another window for reprinting shipment and container labels as well as the list of DD250s that were shipped on the same TCN.

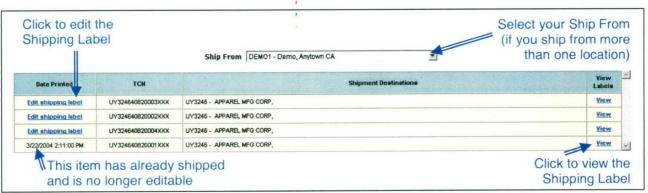


Figure 28 – View Existing Shipments Labels Web Page

4 Manage Depot Operations

Each bill and hold contractor has access to DSCP data to be able to perform depot related functions from the receipt of MROs through the preparation of shipping documents as well as the electronic transmission of the appropriate transactions. The following subsections explain how to use each of the depot functions.

4.1 Review Orders and Generate MROs

Each bill and hold contractor has access to all of the MROs that have been issued to them and not yet filled from DSCP's system called SAMMS. This function is used to call-up a specific ship-to destination by DODAAC or all destinations at one time (see Figure 29). The function is operated by identifying the MROs to NOT be printed by turning off the check mark for a specific MRO in the column identified as "Print". All MROs are initially checked for printing because this is the most commonly selected option. Click the "Print MRO(s)" button when ready to print the MROs (DD Form 1348-1A).

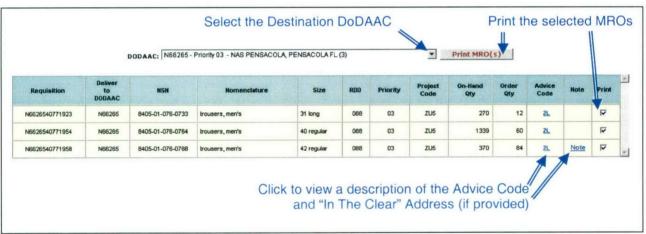


Figure 29 - Review Orders and Generate MROs Web Page

The table of data for the MROs contains the following columns:

- Requisition: The requisition number for each MRO
- Deliver to DODAAC: The DODAAC that is to receive the shipment
- NSN: The National Stock number requested on the MRO
- Nomenclature: The description for the NSN
- Size: The size for the NSN
- **RDD**: The required delivery date for the item stated as the Julian day of the year (RDDs of 777 and 999 are used to indicate high priority MROs)

• **Priority**: A two digit code with the following interpretation:

Code	Conus	Overseas
01	8 days	12 - 13 days
02	8 days	12 - 13 days
03	8 days	12 - 13 days
04	12 days	16 - 17 days
05	12 days	16 - 17 days

Code	Conus	Overseas
06 •	12 days	16 - 17 days
07	12 days	16 - 17 days
08 .	12 days	16 - 17 days
09	31 days	69 - 84 days
10	31 days	69 - 84 days

Code	Conus	Overseas
11	31 days	69 - 84 days
12	31 days	69 - 84 days
13	31 days	69 - 84 days
14	31 days	69 - 84 days
15	31 days	69 - 84 days

- Project Code: A three character code that identifies the project that initiated the MRO
- On-Hand Qty: DSCP's count of the quantity on-hand at the depot that received the MRO after the quantity on the MRO has been subtracted
- Order Qty: The order quantity of the MRO
- Advice Code: A two character code (click on each advice code to get a full explanation)
- Note: Notes are used whenever there is an in-the-clear address for an MRO (Click on the note to see the supplemental address.)
- Print: A check mark in the box in this column means that the MRO is to be printed

A click of the "Print MRO(s)" button causes another window to be opened that contains one or more pages or MRO forms and a list of those MROs (see Figure 30). Two MROs are formatted for printing on each printable page except when there is an in-the-clear address for an MRO. In that case, the in-the-clear address is printed on the bottom half of the MRO page. The "Print" button in the upper left-hand corner of the window is used to print the form.



DO NOT use the browser print button. The "Print" button in the window will format the pages correctly and send the MRO to the shipping data queue.

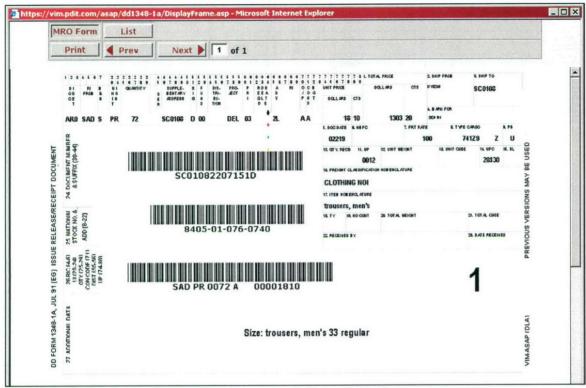


Figure 30 - MRO Form Window

The list of MROs can be viewed by clicking the "List" button at the top of the window (see Figure 31). If a destination's MROs exceed a single page, you may scroll though the pages by using the "Prev" and "Next" buttons. Clicking the "Print" button when viewing any of the pages of the "List" will print every page of the list. Once this MRO has been printed the MRO will move from this queue in to the "Prepare Shipment Labels" queue. However, it can still be reprinted if needed by going to the "Print Unshipped MROs" screen.

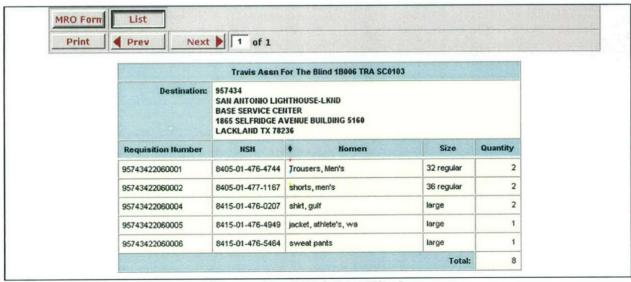


Figure 31 – MRO List Window



The MRO List window makes a great "Pick List" for the warehouse.

4.2 Process Verbal/Written Orders

There are times when material needs to be ordered immediately and the requisitioner cannot wait for the formal system to issue the requisition. In these cases, the bill and hold contractor may receive a verbal or faxed order. When this happens, the system still needs all of the required data, which means that the data must be entered into the system manually (see Figure 32). The manually entered MRO will immediately show up in the bill and hold contractor's queue of MROs (see Section 4.1) so that VIM-ASAP can be used to prepare all required documents and MILSTRIP transactions.

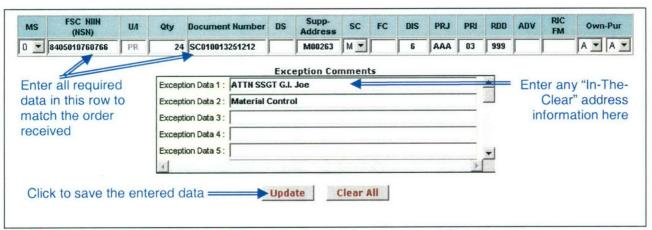


Figure 32 - Process Verbal/Written Orders Web Page

The data entry fields are organized into the same sequence as the standard form that is faxed by DSCP. Simply enter the data in the appropriate field, tab to the next field and enter that data, and then click the "Update" button after all the data has been entered. You may edit or delete the MRO data until the MRO is printed or until the data is replaced sometime in the next few days when DSCP updates SAMMS. The headings for the data fields that need to be manually entered are as follows:

Table 1 – Process	Verbal/Written (Orders 1	Data Fields
-------------------	------------------	----------	-------------

Heading	Definition	Note
MS	Media Status Code	Required
FSC NIIN (NSN)	The National Stock Number has two components (4 digit Federal Stock Code + 9 digit National Item Identification Number)	Required
U/I	Unit of Issue is entered from the verbal or written order, but is then extracted for the selected NSN from the DSCP database	Automatic
Qty	The order quantity	Required

Heading	Definition	Note
Document Number	The 14 character requisition number (6 character DODAAC + 4 digit Julian Date (YDDD) + unique 4 character string)	Required
DS	Demand Suffix (N and R codes are automatically reset to blank)	Optional
Supp-Address	DODAAC for supplementary address	Optional
SC	Signal Code	Optional
FC	Fund Code	Optional
DIS	Distribution Code	Optional
PRJ	Project Code	Optional
PRI	Priority Code	Optional
RDD	Required Delivery Date	Optional
ADV	Advice Code	Optional
RIC FM	The RIC of the depot that forwarded the requisition	Optional
OWN PUR	This is two separate one character data elements entered as if it were a single field (Ownership Code and Condition Code)	Required
Condition Code	Supply Condition	Required
Exception Comments	A maximum of 20 lines (no word wrap) of free form comments	Optional

4.3 Print Unshipped MROs

Once the MRO has been reviewed and printed, it disappears from the Review Orders and Generate MROs queue. While the requisition is in the Prepare Shipment Labels queue, the MRO form itself is not available. The Print Unshipped MROs queue allows you to review or reprint those MROs during the shipping phase of the process. Once the shipping labels have been finished, the MRO would be visible in the View Existing Shipping/Container Labels queue.

4.4 Prepare Shipment Labels

Shipment labels can be generated for a collection of already printed MROs that are all going to the same destination (see Figure 33). Only MROs that have not already been shipped and were previously printed using the function "Review Orders and Generate MROs" (see Section 4.1) appear in the list of MROs for the selected destination. This function prepares the required shipping labels (DD Form 1387), the bar coded container labels, a list of requisitions and quantities as a checklist for the shipment, and any of the MROs that had their quantity changed.

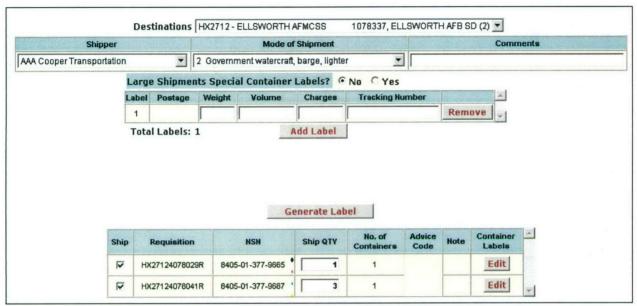


Figure 33 - Prepare Shipment Labels Web Page

The data entry requirements have been organized for this user's manual into a top half and a bottom half. The top half (see Figure 34) data is for information about the entire shipment (e.g., shipper, mode of shipment, etc.). More than one address label is required when the shipment is being made in containers that can be separated (e.g., multiple pallets). Each separate container needs its own address label. Change the number of address labels from the default value of one to whatever number is required by clicking the "Add Labels" button for each label needed.

The same option for large shipments is available here as it was on the Prepare DD250s page illustrated in Section 3.3. Selecting "Yes" for Large Shipments Special Container Labels will allow you to download only one page of labels per NSN, printing as many copies as you need locally. This can greatly reduce the time needed to generate the labels and download them.



Figure 34 – Top Half of Prepare Shipment Labels Web Page

The bottom half (see Figure 35) is used to enter data about each requisition in the shipment. Each of the requisitions that is to be included with this shipment need to have a check mark inserted in the "Ship" column by clicking that column for the appropriate requisition. The quantity to be shipped can be changed if there were not enough items for a specific requisition. When the quantity is changed, another MRO (DD From 1348-1A) can be printed to replace the previously printed MRO. The number of containers can also be changed and/or edited using the "Edit" button in the right hand column for each requisition. The "Edit" button causes a small window to be opened (see Figure 36) where the number of items in each container can be changed as long as the total quantity for the referenced requisition remains the same at the time that the "Update" button is clicked.

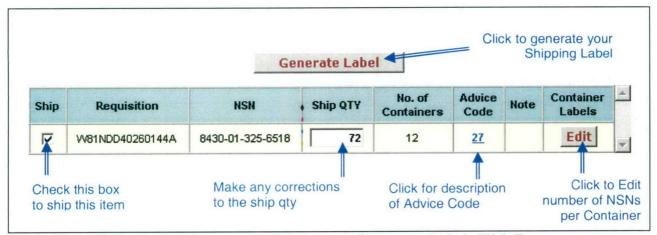


Figure 35 – Bottom Half of Prepare Shipment Labels Web Page

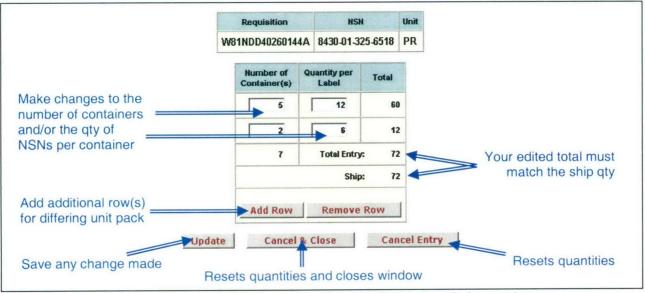


Figure 36 - Small Window for Editing Container Information

Click the "Generate Label" button when you are satisfied with all of the data that you have entered. The "Generate Label" button causes a new window to be opened that contains the shipping label (see Figure 37), any changed MROs (button is grayed-out if no MROs were changed), the container labels (see Figure 38), and a list of all requisitions that are included in this shipment (see Figure 39). The list is intended to be used as a checklist to make sure that every container is accounted for in the shipment. Each of the documents can be printed by clicking on the document (e.g., "Shipping" button) of interest at the top of the web page and then clicking the "Print" button at the top of the web page. Use the maroon print button, not the browser's print button. Until the "Finish" button is clicked, the shipping label (see Figure 37) will contain the large red letters VOID as a reminder that the shipment remains open for changes and that none of the MILSTRIP transactions have been transmitted.



A click of the "Finish" button will remove the **VOID** lettering and transmit the appropriate MILSTRIP transactions for each of the MROs in the shipment. Do not "Finish" the document unless you are ready to transmit the MILSTRIP transactions.



Figure 37 – New Window for Shipping Forms

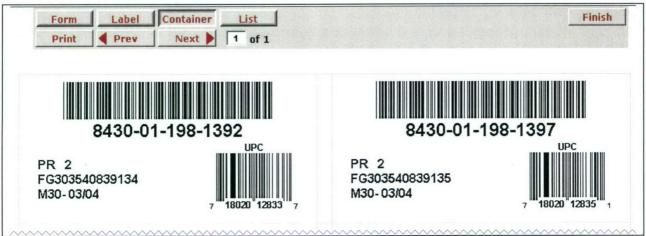


Figure 38 - New Window for Container Forms

The container labels are formatted to match a standard 5263 Avery label (4" \times 2") – 10 labels per sheet.

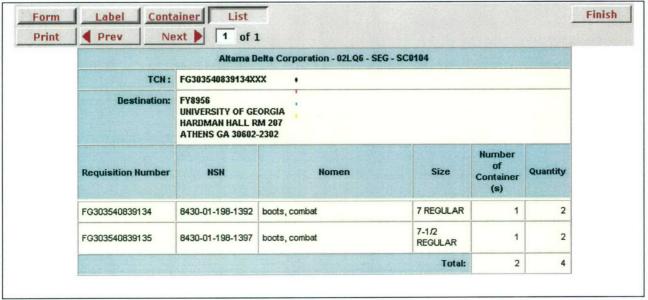


Figure 39 - New Window for List

4.5 View Existing Shipment/Container Labels

Existing shipping and container labels can be recalled and edited or reprinted (see Figure 40) for a few days after they were originally created. This is done so that lost or damaged documents can be reprinted. Shipments can also be edited before they are finished to add or remove MROs and to change MRO quantities. Shipments that already have a "Date Printed" can only be viewed. They cannot be edited.



Figure 40 - View Existing Shipment/Container Labels Web Page

4.6 Review and Reply to Follow-Up Inquiries

Follow-up inquiries are periodically sent by the organization that initiated a requisition to inquire about the status of their order. The inquiries are directed to the depot that is responsible for filling the order. If the requisition has already been shipped, VIM-ASAP automatically replies to the follow-up inquiry with that information. If the requisition is still in the depot's queue, it is displayed on this web page (see Figure 41) so that an estimated shipment date can be entered. The people responsible for MROs should review this list every day to provide an estimated shipping date that is sent back to the requestor. The most common follow-up inquires are those for high priority requisitions with an RDD of 999, which means ship it immediately. This is sent the same day that the requisition is sent. You need not reply to this inquiry if the requested items will be shipped the same day that the requisition is received. If not, you need to enter an expected shipping date and then click the "Transmit" button.

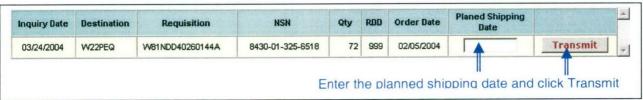


Figure 41 – Review and Reply to Follow-Up Inquiries Web Page

5 Reports

Several reports are available to manufacturers, with several additional reports being available to Bill & Hold vendors. These now exist in a separate menu folder for convenience.

5.1 View Contract Shipments and Invoices

The "View Contract Shipments and Invoices" function (see Figure 7) utilizes a mixture of data from SAMMS, VIM-ASAP, and VPIS to construct a matrix for each contract of shipments and CLINs that tracks the completion status of each contract. SAMMS is used to define contract data (e.g., CLINs, NSNs, order quantities, received quantities, etc.). VIM-ASAP is used to identify shipment data (e.g., shipment numbers, date shipped, CLIN shipment quantities, etc.). VPIS is used to correlate shipment numbers with a QAR's acceptance of that shipment. DSCP Personnel must first select the contractor of interest by using the pull-down arrow to the right of the contractor's CAGE and name. Once selected, all contracts and delivery orders for that contractor will appear in the pull-down lists below the contractor's name. Manufacturers simply select the contract and delivery order of interest to display its data in the lower half of the frame.

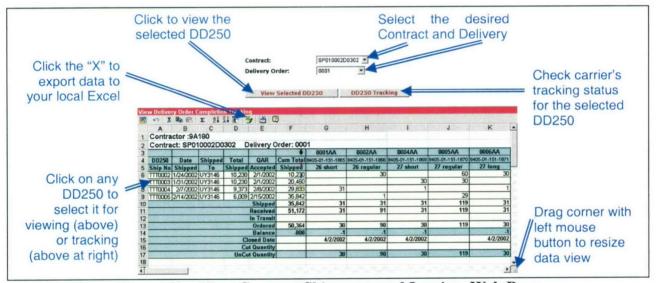


Figure 42 – View Contract Shipments and Invoices Web Page

The data is presented in the frame with all of the shipments listed down the left hand side of the table and all the CLINs listed along the top of the frame from left to right. Each column and row heading is explained in either Table 2 or Table 3.

Many of the contracts have far too many CLINs and shipments to view on one screen. The data can be easily transferred to Excel with a click of the green X at the top of the frame. Excel can be used to format the data for viewing, printing, or saving to the user's local disk for later use. This function can also be used to gain access to DD250s and to carrier tracking data. Simply click on any row in the frame that has a shipment of interest. A click of either the "View Selected"

DD250" or "View Carrier Tracking" button provides access to the selected DD250 or to the carrier's web site that tracks each shipment.



Carrier data does not exist for a bill and hold contractor's shipment to itself nor does it exist if the carrier selected by the manufacturer does not provide for web based tracking of their shipments.

Table 2 - View Contract Shipments and Invoices Column Headings

Column Heading	Description	Data Source		
DD250 Ship No	The shipment number is extracted from each DD250 that was completed using VIM-ASAP.	VIM-ASAP		
Date Shipped	The date shipped is extracted from each DD250.	VIM-ASAP		
Shipped To	The shipped to DODAAC is taken from the SAMMS contract shipment destination.	SAMMS		
Total Shipped	The total quantity shipped is extracted from each DD250 for all VIM-ASAP CLINs for each shipment.			
QAR Accepted	The QAR acceptance date is taken from DFAS's records from their VPIS system. This data is accessed so that manufacturers can stop faxing/mailing signed DD250s to DSCP. The existence of the QAR acceptance date in VPIS is the equivalent of seeing the signature on the paper DD250. The acceptance date is only sporadically recorded for fast pay contracts when the items are being shipped to a retail site and the inspection is done at the destination.	VPIS		
Cum Total Shipped	The cumulative total shipped is a running total extracted from the DD250 for all CLINs for all shipments.	VIM-ASAP		

Table 3 - View Contract Shipments and Invoices Row Headings

Row Heading	Description	Data Source
Shipped	The shipped quantity is the total for all shipments for each column (one column for all CLINs and one for each individual CLIN). This data is only complete if all shipments were made using VIM-ASAP. It is not uncommon for manufacturers to begin using VIM-ASAP after they have already completed at least one shipment for a contract. In those cases, the total shipped quantities will be inaccurate. Check the first shipment number in the list. If it starts with "0001" then VIM-ASAP has a complete record of all shipments.	VIM-ASAP
In Transit	The in transit quantity is calculated by subtracting SAMMS's received quantity from VIM-ASAP's shipped quantity. This quantity is not reliable when the manufacturer did not start using VIM-ASAP until they had already completed some shipment prior to their use of VIM-ASAP.	VIM-ASAP and SAMMS
Received	The received quantity is extracted from the contract's received quantity, which is calculated from the D4S transaction that is generated by receiving organization. There are instances where the QAR has accepted the items, but they have not been recorded as received. This happens when the D4S caused a violation or the receiving organization has not yet posted the D4S.	SAMMS

Row Heading	•Description	Data Source
Ordered	The ordered quantity is taken from the contract's order quantity	SAMMS
Balance	The balance quantity is calculated by subtracting the received quantity from the ordered quantity	SAMMS

Shipment data will be kept for each contract as long as that contract is active in SAMMS. Once the data is deleted from SAMMS, you will no longer be able to utilize this function for that contract.

5.2 Track DD250 Payments

This function displays the payment status of all SAMMS-formatted VIM-ASAP DD250s (see Figure 43).



Figure 43 - Track DD250 Payments Page

This list is primarily focused on unpaid balances. Fully paid invoices are kept in the list for a few weeks, while unpaid and partially paid invoices are kept until they are paid in full. The list is initially sorted by invoice number with the oldest at the top of the list. Clicking on a column heading (the row with the green background) will sort that column in ascending order. A second click on that same heading will reverse the sorting to descending order. (See Figure 44)

Click on the Contract column heading to sort by Contract, Delivery Order and Shipment number. An arrow indicates whether the column is in ascending or descending order.	Invoice Number	Invoice Date	Contract	Delivery Order	Shipment	Invoice Amount
	9424	06/24/2003	SP010001D0329	0012	AMC0001	\$3,389.76
	9429	06/26/2003	SP010001D0329	0012	AMC0002	\$2,677.14
	9432	07/08/2003	SP010001D0329	0012	AMC0003	\$4,863.15

Figure 44 - Sorting the Data on the Track DD250 Payments Page

Payment data for each CLIN can be reviewed by clicking the "View" button at the end of each invoice. Recent DD250s may not have a "View" hyperlink for a day or two because the DD250 has not yet been recorded in the DFAS payment system. SAMMS-formatted payment data is extracted from the DFAS system called Vendor Pay Inquiry System (VPIS), currently located online at http://www.dfas.mil/money/vendor/index.htm. MOCAS-formatted payment data cannot be tracked at the current time due to MOCAS payments not being associated with specific

Invoices and CLINs, however MOCAS-formatted data can be viewed online in VPIS at the address above. As more and more contracts are being generated as SAMMS contracts, the MOCAS data situation will be disappearing. Each manufacturer can automatically contact DFAS if the VPIS data is not updated after five days by clicking the Inquire button at the far right. (See Figure 45) This button will be available if an Invoice has been in VIM-ASAP for 5 days without any VPIS data, or if it has been over 33 days without the Invoice being paid in full.

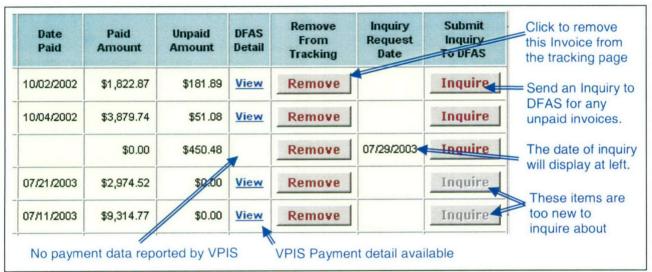


Figure 45 - DFAS Detail and Inquiry Section of Track DD20 Payments Page



The "Remove" link will remove that Invoice Number from the tracking window. This feature will keep paid items from displaying and make it easier to view only those items that need to be tracked.

A click of any "View" button generates a detailed list for the selected invoice (see Figure 46). Whenever DFAS makes a partial payment for any of the CLINs, they create a suffix code for that CLIN and separate the invoice amounts into multiple pieces. DFAS frequently does not enter some of the data into VPIS until they make a payment. It is not uncommon for the gross invoice amount to be blank until the payment is made. Unpaid items are highlighted in a red font. Any item marked "*** paid? ***" are items that have disappeared from VPIS without displaying any record of payment. This is most common when a manual payment is made (not necessarily by check, but an electronic payment) outside the VPIS system.

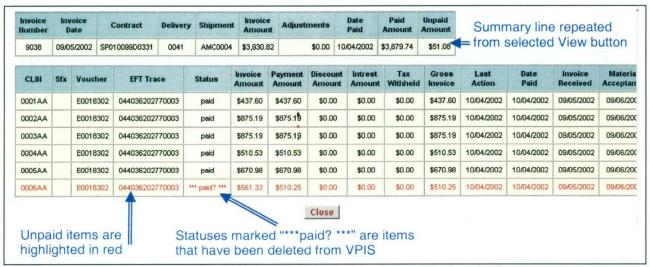


Figure 46 – DFAS Detail Web Page for a Single DD250

The list of invoices contains columns that are defined in the table below. The column marked as "Source" is used to identify the source of the data.

Table 4 - Track DD250 Data Fields and Sources

Name	Source	Description			
Invoice Number	ASAP	This number is extracted from Block 6 of each DD250.			
Invoice Date	ASAP	This date is extracted from Block 3 of each DD250.			
Contract	ASAP	This is extracted from block 1 of the DD250.			
Delivery Order	ASAP	This is extracted from block 1 of the DD250.			
Shipment	ASAP	This is extracted from block 2 of the DD250.			
Invoice Amount	ASAP	This is extracted from block 20 for the sum of all CLINs for the DD250.			
Adjustments	VPIS	This is extracted from the DFAS data for discounts taken (negative number) and interest paid (positive number).			
Date Paid	VPIS	This is extracted from the DFAS data for the most recent payment on any of the CLINs.			
Paid Amount	VPIS	This is extracted from the DFAS data for the sum of all payments for a CLINs of the DD250 (including both partial and full payments for eacl CLIN).			
Unpaid Balance	ASAP & VPIS	This is the difference between the Invoice Amount and the Paid Amount.			
DFAS Detail		Click the appropriate button to see the detailed data for each CLIN. A blank button means that DFAS has not yet received the digital DD250 data. This is normal for a day or two. Contact the VIM-ASAP help desk if the data has not been received by DFAS after more than three working days. There may be a problem at one end or the other that needs to be corrected.			

The detailed list of CLIN payments for the selected invoice contains the following columns (a few of the columns at the end of the list would not fit on the figure, but are defined below):

Table 5 - DFAS Detailed Invoice Data Sources

Name	Source	Description			
CLIN	ASAP	This number is extracted from Block 15 of the selected DD250.			
Sfx	VPIS	DFAS creates a suffix code whenever a CLIN is split into two or more payments).			
Voucher	VPIS	DFAS voucher identification number			
EFT Trace		Electronic fund transfer trace number (if payment was made electronically)			
Check	VPIS	DFAS check number (if payment was not made electronically)			
Status	VPIS	DFAS payment status (either pending or paid)			
Invoice Amount	ASAP	This number is extracted from Block 20 of each CLIN.			
Payment Amount	VPIS	DFAS payment record for each CLIN			
Discount Amount	VPIS	The amount of discount taken by DFAS.			
Interest Amount	VPIS	The amount of interest paid by DFAS whenever the payment is late.			
Tax Withheld	VPIS	This is a DFAS number that is not explained, but can be used in the calculations.			
Gross Invoice	VPIS	This is the sum of the invoice amount plus the interest amount less the discount amount and tax withheld.			
Last Action	VPIS	The date of the last action taken by DFAS.			
Date Paid	VPIS	The date that a CLIN is paid (blank while payment is pending).			
Invoice Received	VPIS	The date that DFAS received the invoice.			
Material Acceptance	VPIS	The date that the material was accepted by the ship-to destination (block 13 of the DD250). This typically comes from the date that the D4S MILSTRAP transaction was created.			
Locator Code	VPIS	Defense Contract Management District (DCMD), or the Defense Plant Representative Office (DPRO), or Accounting Office(AO)			
Scheduled Payment	VPIS	This is the date that DFAS has entered for the date they plan to make the payment (frequently left blank by DFAS).			
Reason Code and Remarks	VPIS	These two codes work together to explain what is happening with the payment. You can download a DFAS document that explains these codes at http://www.dfas.mil/money/vendor/remdoc.pdf .			

5.3 Inventory Count

The inventory count report can be used to synchronize each bill and hold contractor's inventory records with those of DSCP. DSCP's records are based on adding any quantities that were

accepted from a DD250 and subtracting any quantities for an MRO that was issued (issued MROs are requisitions with a status of "BA" that are assigned to the bill and hold contractor). The table of data for the inventory counts contains the following columns:

- NSN: The national stock number of each item in the list
- Size: A definition of the size for each NSN
- **DSCP Qty**: The DLA owned quantity on-hand in the warehouse <u>after</u> all of the issued MROs have been filled.
- Outstanding Order Quantity: The total quantity from MROs that have been issued to
 the warehouse, but have not yet had their shipping label printed. This quantity may still
 be in storage or it could be picked and on a pallet that does not yet have its shipping label.
- Total Qty: The sum of the DSCP Qty and the Outstanding Order Quantity
- Full Cases: The total quantity divided by the unit pack (the whole number only with any fraction removed).
- Qty in Broken Cases: The fraction that was left over from the full case count.

A drop-down menu allows you to select a specific PGC to view. All PGCs as a group or the displayed PGC can be printed by using the relevant "Print All PGCs" or "Print Selected PGC Only" button at the top of the web page (see Figure 47). If the PGC listing exceeds a single page in length, you may scroll through the pages by clicking the "Prev" or "Next" buttons.

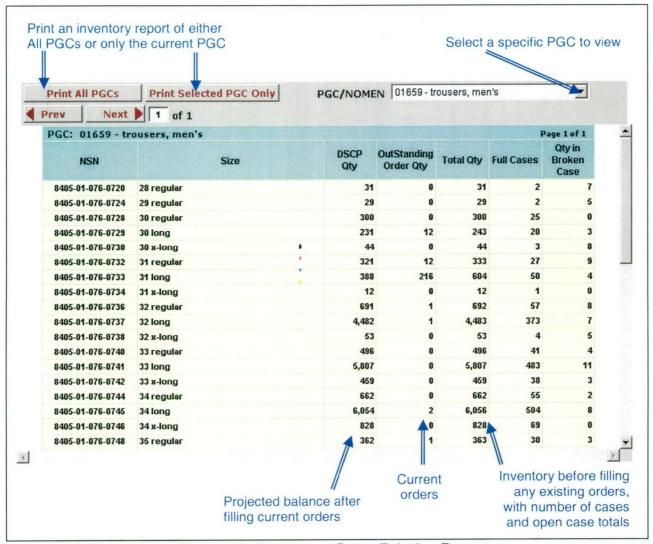


Figure 47 – Inventory Count Printing Page

5.4 Requisition Shipment Tracking

This report provides access to the shipment status of requisitions that have been shipped during the last month or two. The status stays available for inquiry for one month after the requisition has been received and is closed out of DSCP's database. The inquiry is done by entering the requisition number and any suffix code (see Figure 48) in the fields provided at the top of the web page. A click of the "View" button will display the data that is known about requested requisition in a data table beneath it.

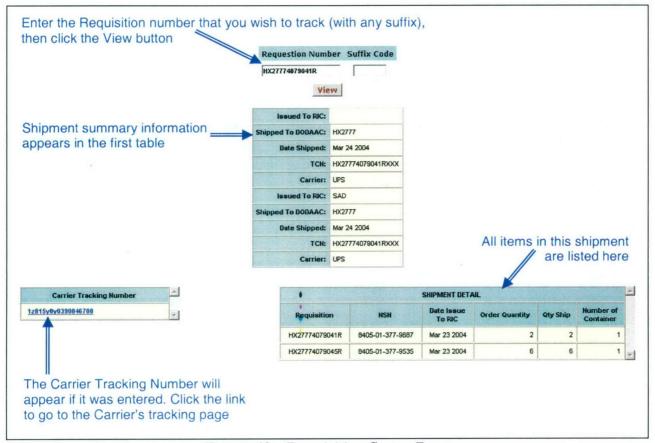


Figure 48 – Requisition Status Page

If you entered a Tracking Number when you selected the Shipper and Mode of Shipment in the Prepare Shipment Labels window, it will be displayed as a hyperlink. Clicking this link will open a new browser window and load the shipper's tracking detail page for that particular shipment (if the shipper has that feature online).

5.5 Shipped Requisitions

This report provides a listing of all requisitions shipped within a specified time frame (see Figure 49). Once the desired Start Date and End Date have been filled in, clicking the "View" button will launch an Excel object showing all MRO data completed within that time frame. The window can be resized by clicking-dragging the lower right corner, and can be exported to a separate Excel spreadsheet on your local computer by clicking the green Excel "X" icon beneath the title bar.

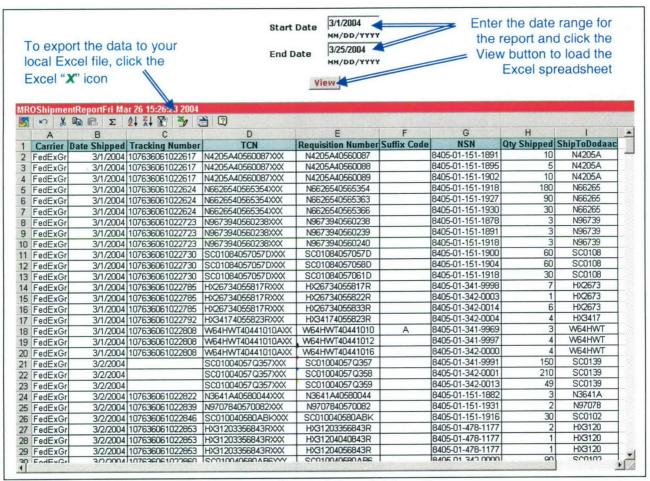


Figure 49 – Shipped Requisitions Page

This report is designed to simplify the Bill & Hold manufacturer's reconciliation of shipping charges. Once the data for the desired time period has been downloaded and shipping invoices have been received (i.e., weekly UPS statements, FedEx invoices, etc.), the charges for each shipment may be entered on each line. All other required information should already be listed from the original data.

5.6 Active Contracts

The Active Contracts function is another Excel object that allows a manufacturer to view all open contracts, delivery orders and CLINs. (See Figure 50) As with the Shipped Requisitions page, clicking on the green Excel "X" will download the data in to a local copy of Excel on the user's computer. The data can be imported into a manufacturer's own enterprise system by saving the downloaded Excel file in whatever format (Comma-Separated Values or CSV, Text, etc.) necessary.

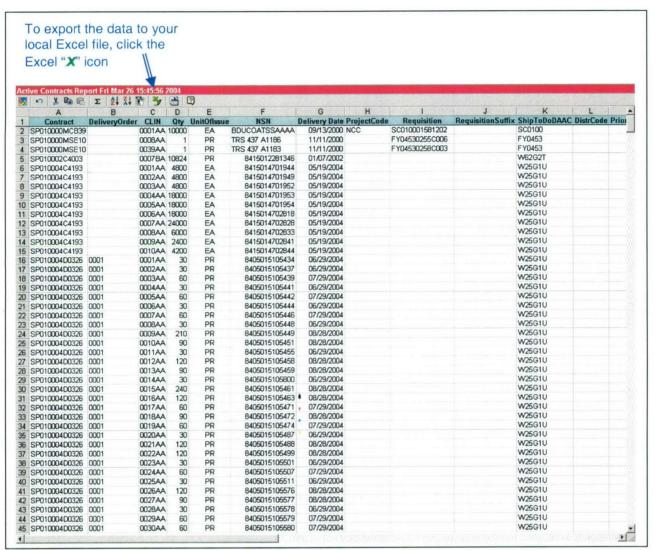


Figure 50 - Active Contracts Page

Since this report lists all active contracts, there is no selection or specifying of dates required.

Appendix A. Registration for Electronic Transmission of DD250s Using WinS

DFAS (Defense Financial and Accounting Service) has established a Web-based system they call WInS (Web Invoicing System). Any defense supplier can use its system to:

- 1) Set up a new account
- 2) Enter manual invoices directly into the Web site (non-ASAP invoices)
- 3) Obtain production approval for ASAP transmission of electronic invoices
- 4) Monitor progress of DFAS payments

Functions 1, 3, and 4 are part of ASAP processing and are explained in the following subsections. Function 2 can be used to manually enter electronic invoices into WInS for non-ASAP contracts. Currently WInS is only used

A-1. Setting Up a New DFAS Account

Before authorizing ASAP to transmit electronic invoices each new manufacturer must first establish a new account with DFAS. The first page that appears after accessing the Wins site (See Figure 6.1-1) permits existing users to log in or new users to create an account.



Figure A-1: WInS System Login Page

To create a new account:

- Go to the WInS Web site at http://ecweb.dfas.mil/.
- Click on "New Account." There is no need at this point to enter a user name or password.
- Fill out the information requested in the fields provided.
- Remember to checkmark the small boxes to the left of MOCCAS and SAMMS by clicking each box. DFAS requires ASAP to be able to transmit both MOCAS and SAMMS invoices. ASAP users do not need to know the difference between SAMMS and MOCAS invoices. The DSCP database that is used by ASAP for its contracting data identifies the format of the invoice transmission.
- The ASAP user must remember to respond "Yes" to the question toward the bottom
 of the page "Interested in batch submission?" ASAP does batch submissions of
 invoices to DFAS.

- Enter your CAGE in all caps. The WInS system is case sensitive.
- Click the "Continue" button after completing the fields in the rest of the form. DFAS
 will process the request and e-mail you a user identification and password within a
 few days.

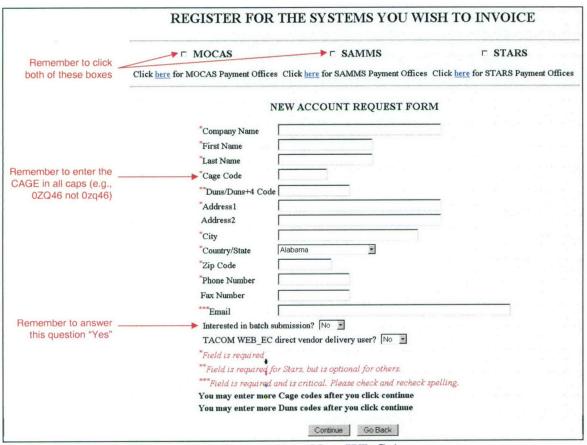


Figure A-2: Setting Up a New WInS Account

A-2. Obtaining Production Approval

DFAS has approved ASAP for production submittal of both MOCAS and SAMMS formatted invoices.

An additional test needs to be performed each time a <u>new</u> manufacturer requests authorization to transmit production (i.e., live) invoices to DFAS. In doing this, DFAS is not testing ASAP's transmission of correctly formatted data. They are testing the setup they need to do for each new manufacturer that uses their Web site.

To perform the test:

- Log in as system administrator.
- At the bottom of the next page, click "Authorize DFAS Transmission."

- Next select "AUTHORIZED for Testing."
- Click the "Update" button.
- Once this is done, use ASAP to create a DD250 (see Section 5.2). You will not be paid by DFAS for this DD250, so choose one you have already submitted for payment.
- Provide the information for the DD250 and then click the "FINISH" button on the DD250 page.
- ASAP will automatically send the test DD250 to DFAS. DFAS will verify that the
 information is correct. It will then send an e-mail message informing users they are
 approved or declined for production submittal of DD250s to DFAS. If declined,
 phone or send e-mail to the ASAP help desk.
- DFAS uses the e-mail address you supplied when you set up the DFAS account (see Figure 6.1-2).
- Once approved for production, return to the System Administrator's function and click the "AUTHORIZED for Production" and "Update" buttons. From this point forward, every "FINISH"ed DD250 will be transmitted electronically to DFAS for payment.

A-3. Monitor Status of DFAS Payments

The status of your DFAS payments can be monitored using the WInS Web site.

To view your DFAS payments:

- Go to the site at https://ecweb.dfas.mil/.
- Entering the user identification and password sent to you by DFAS in an e-mail message. Enter this information at the WInS web site (as shown in previous Figure 6.1-1.)
- Figure 6.3-1 (below) will appear.



Figure A-3: First Web Page After Login "Select MOCAS or SAMMS"

- Determine whether the invoice of interest is for a MOCAS or SAMMS format. The ASAP function "View DD250" will show you which format was used for each invoice.
- Next click the MOCAS or SAMMS button on the left-hand side.

MOCAS:

- "MOCAS Invoice Entry System" page will appear
- Select "Commercial Invoices" button.
- Choose "View Log" button found on the left-hand side to view submitted commercial invoices.
- A page similar to Figure 6.3-3 will appear right after the "View Log" button is clicked. This page will list all of the submitted and accepted ASAP invoices
- This page will also provide you with three options for each invoice in the list.
- The first option is exercised by moving the mouse cursor over the invoice of interest in the "Status" column. A message will appear that explains the current status of that invoice.
- The second option is a temporary "Edit" link that allows you to make any changes or fix any errors that are discovered by DFAS. The "Edit" option goes away as soon as DFAS processes the invoice for payment. You should never need to edit any of the ASAP submitted invoices. The data is extracted from the DSCP contracts database directly. No change is made to this data.
- The third option allows you to click on the invoice number link in the "Invoice No." column. The detailed data for that invoice will then appear as shown in Figure 6.3-4.
- OR stay on current page to manually create a non-ASAP invoice or to check the status of invoices created by ASAP

SAMMS:

- The upper left-hand corner of the next Web page that will appear is shown in Figure 6.3-2.
- This page permits the user to either manually create an invoice or to check the status of invoices created by ASAP.

• Check the status by clicking the "View Log" button

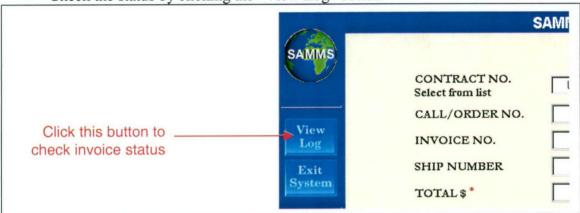


Figure 6.3-2: Second Web Page After Login "View Log"

- The page in Figure 6.3-3 will appear right after the "View Log" button is clicked. This page will list all of the submitted and accepted ASAP invoices
- This page will also provide you with three options for each invoice in the list.
- The first option is exercised by moving the mouse cursor over the invoice of interest in the "Status" column. A message will appear that explains the current status of that invoice.
- The second option is a temporary "Edit" link that allows you to make any changes or fix any errors that are discovered by DFAS. The "Edit" option goes away as soon as DFAS processes the invoice for payment. You should never need to edit any of the ASAP submitted invoices. The data is extracted from the DSCP contracts database directly. No change is made to this data.
- The third option allows you to click on the invoice number in the "Invoice No." column. The detailed data for that invoice will then appear as shown in Figure 6.3-4.

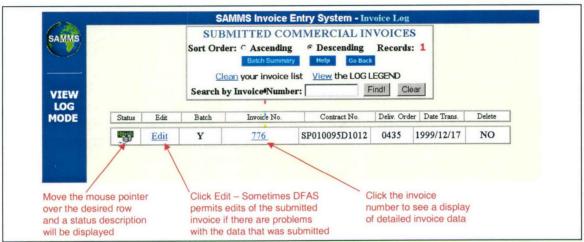


Figure A-4: Third Web Page After Login "Review Individual Invoices"

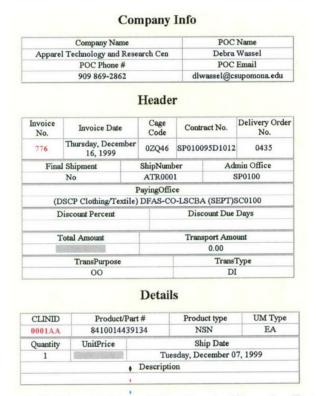


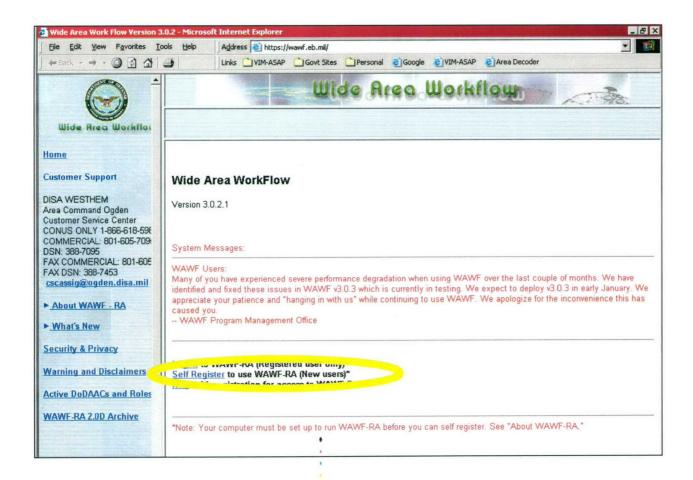
Figure A-5: Fourth Page After Login "Invoice Detail"

Appendix B. Registration for Electronic Transmission of DD250s Using WAWF-RA

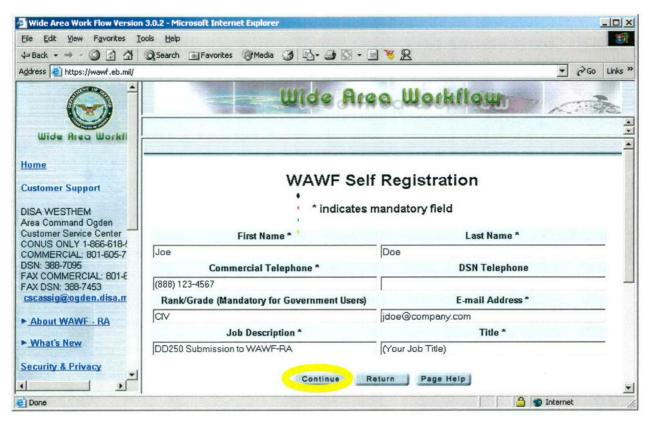
B-1. Self Registration for WAWF-RA

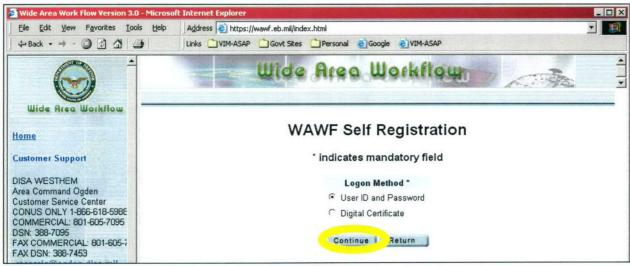
To Self-Register for Wide Area Work Flow, go to http://wawf.eb.mil and follow the steps illustrated below. If you have any questions during the process, please call the WAWF Help Desk toll-free at (866) 618-5988. The phone number will always appear in the left-hand frame of their website.

Please note that the information filled in on these screenshots are for illustrative purposes only – please enter your own contact information as appropriate.

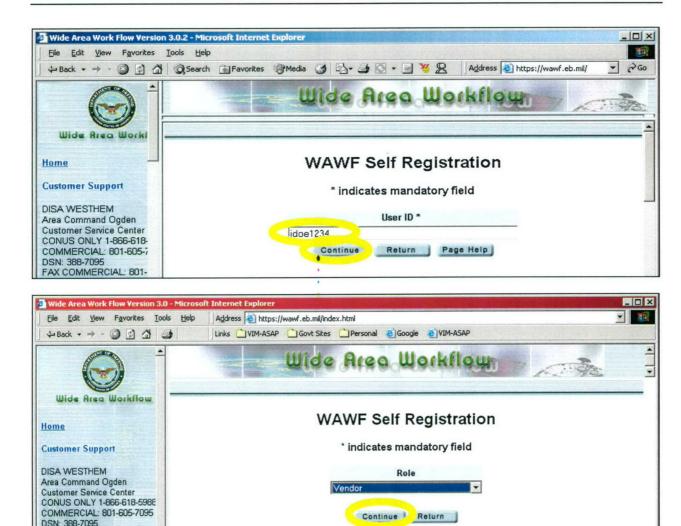


54

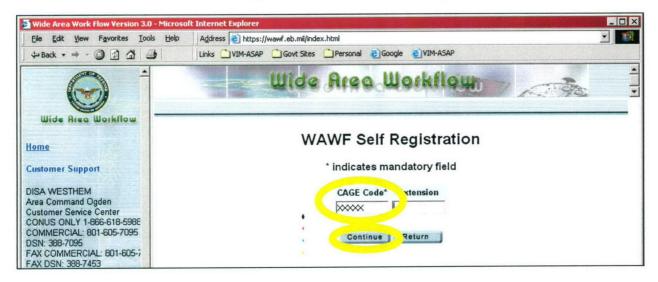


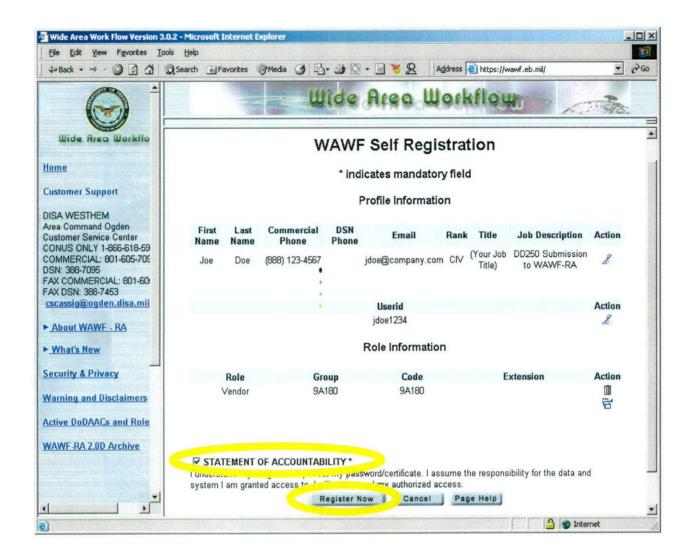


FAX COMMERCIAL: 801-605-7



NOTE: You would normally select "Group Administrator" (GAM) on the screen above. However, most users have gotten errors using this setting. Alternately, you should register as a Vendor and then call the WAWF Help Desk and ask them to change the account to a GAM.





B-2. Registration for Electronic Transmission of DD250s Using WAWF-RA

At this point you have completed the WAWF Self-Registration process. As soon as you receive a notification from WAWF that your account is active (along with a one-time password to access the account), please notify vim-asap@ct-dscp.com so that a sub-user account can be created.

You will be required to log into WAWF once again to activate the new sub-user so that VIM-ASAP can transmit your data for you. Once this has been accomplished, you may select "Authorized for WAWF-RA" on the Administer DD250 Data page of VIM-ASAP. From that point on, any DD250 that you finish in VIM-ASAP will be transmitted to your DCMA office.

Appendix D

VIM-ASAP Overview

VIM-ASAP

(Virtual Item Manager - ARN Supply-chain Automated Processing)

VIM-ASAP v2.1 Capabilities Overview

Prepared for:

Apparel Research Network Program
Defense Logistics Agency (DLA)
and
Defense Supply Center Philadelphia (DSCP)



Prepared by:

P.D.I.T.



Product Data Integration Technologies, Inc.

100 W. Broadway Avenue, Suite 540

Long Beach, California 90802

(562) 495-6500

(562) 495-6509 Fax

info@pdit.com

http://www.pdit.com

July 21, 2003

Overview of System Capabilities and Advantages

VIM-ASAP is being sponsored by the DLA Apparel Research Network program and DSCP. The system has been designed as part of a total supply chain management system to provide support for DSCP Clothing and Textile contractors who manufacture items and/or handle the distribution as bill and hold contractors (see Figure 1).

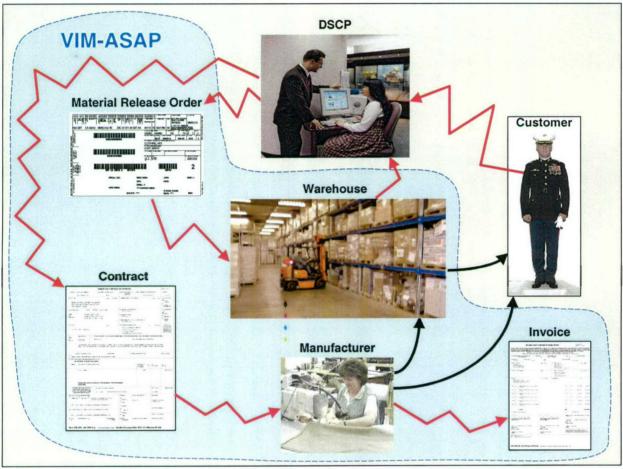


Figure 1: Role of VIM-ASAP in DSCP Supply Chain Management

The manufacturer's functions of the system support the following:

- Acceptance and handling of electronic contracts (DD Form 1155)
- Preparation and printing of all shipping documents, i.e., Packing Slip (DD Form 250), Shipment Labels (DD Form 1387), and Bar Coded Container Labels
- Transmission of electronic invoices (DD Form 250) to DFAS and to DCMA's QARs via WAWF-RA
- · Monitoring DFAS payments for each invoice and each CLIN

The warehouse functions of the system support the following:

- Acceptance and handling of incoming shipments (MRO DD Form 1348-1A)
- Acceptance and handling of incoming electronic requisitions and the printing of MROs (DD Form 1348-1A), bar coded container labels, and Shipment Labels (DD Form 1387)

- Acceptance and handling of incoming MRO related orders and inquiries
- Automatic preparation and transmission of all required MILSTRIP and MILSTRAP transactions that eliminates the requirement to use DAMES

VIM-ASAP is an Internet based system where all the data is managed and maintained on a DLA server and database that is dedicated to this purpose. Manufacturers and warehouses access their specific subset of data from their own sites using a local Internet Service Provider and browser. Nearly all of the data is automatically extracted from a variety of DLA, DFAS, and DCMA systems that are used by DSCP to manage contracts, requisitions, inventories, invoices, and other supply chain related data. The only other data in the system is the small amount of data that is entered by individual users, e.g., the quantity shipped for a specific CLIN. DSCP data is updated each night after all of the previous day's actions have been recorded. The updated data is available each morning normally around 3:00 AM (East Coast Time), although there are periodic problems that can delay the updates. Even when there are problems, the prior day's data is available until the update is completed.

VIM-ASAP has been designed so that all communications and data formatting is done by the system automatically. The user does not need to be aware of any data formats or the transmission protocols. This can be seen when the system formats and transmits the appropriate MILSTRIPs and MILSTRAPs whenever an action takes place. For example, when a bill and hold contractor finishes a DD250 for a shipment to themselves, two things happen in the background. The first is the fully automatic formatting and transmission of the DD Form 250 data to a DFAS system called WInS (Web Invoicing System). Additionally, if the user has established an account with Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA), an electronic DD Form 250 is automatically formatted and transmitted to the DCMA office of the user's Quality Assurance Representative (QAR) using the WAWF-RA system. The second thing that happens is the fully automatic formatting and transmission of the MILSTRAP transaction known as a D4S that informs the DLA systems of the receipt of the items identified on the DD Form 250.

The power of the VIM-ASAP system is based on the consistency of all documents and transmissions that are extracted from the single source of data from DLA's systems, e.g., the contract data in SAMMS is used to prepare both the paper DD Form 250 and the transmission of the invoice to DFAS. There can be no data mismatch, and thus no payment-delaying correction cycle. The only problem with this single source of information can be seen when the source data is incorrect. When this happens, personnel from each manufacturer or warehouse will need to contact the people they deal with at DSCP to correct the data problem. VIM-ASAP also provides an 800-number and e-mail address that can be used to get problems resolved. This may periodically cause a delay at the start of an activity, but the advantage is that the problems are corrected before more serious problems occur, such as shipments going to the wrong location or delays in payments because of some mismatch in data between the invoice and DFAS's records.

VIM-ASAP supports two classes of users and each has their own, but overlapping series of functions that they can perform. A summary of the functions that each class of users can perform is identified in the following sections. Detailed explanations of how to perform each function can be found in the users manual.

Do not miss Section 4 "User Notices - Important"

1 Manufacturers

The primary manufacturer's functions (see Figure 1-1) include the receipt and review of new contracts, the recording of the planned start of cutting, the preparation of the required shipping documents and invoices, and the monitoring of the payment process. The specific manufacturing capabilities of VIM-ASAP are as follows:

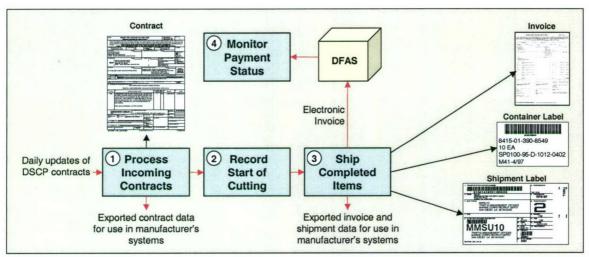


Figure 2-1: Manufacturer's Primary Functions

- 1. Contracts and delivery orders can be received electronically as a DD Form 1155 "Order for Supplies or Services" as well as a queue of CLINs that can be individually started into production as an entire or partial CLIN order quantity. The contract data is updated every night from the prior day's releases by DSCP. The data can also be downloaded for use in each manufacturer's internal accounting and/or production control systems. Any differences detected between the paper contract and the DD Form 1155 can be automatically submitted to the appropriate Item Manager/Buyer at DSCP for evaluation and correction if appropriate. Any corrections would be available in VIM-ASAP immediately upon approval by DSCP and then updated in SAMMS.
- 2. The system provides a list of CLINs for unfinished orders so that the start of cutting can be recorded for each contract and CLIN. This information can be used by manufacturers to track the status of their orders as well as by DSCP for a variety of purposes, including helping with the evaluation of the impact of a change to the schedule or order quantity. Both DSCP and the manufacturer can monitor the progress of the contract on the "View Contract Shipments and Invoices" screen.
- 3. When it is time to ship an order, the system can prepare all of the required shipping documents and labels. A shipment is a collection of containers (e.g., boxes) from one or more DD Form 250s. Each container requires a bar coded stick-on label that shows the NSN, quantity, and contract identification. The collection of containers on an individual pallet or inside a larger container requires a "Military Shipment Label" (DD Form 1387). The shipment contains one or more packing slips that identify all of the items being shipped. The packing slip is also the invoice in the form of a Material Inspection and Receiving Report (DD Form 250). The system is capable of formatting and printing all of these documents on 8½x11 sheets of standard Avery labels in accordance with the current MIL-STD-129, and then formatting and transmitting the invoice data to DFAS for payment. If the

manufacturer and their QAR are signed up with a WAWF-RA account, an electronic copy of the invoice is also automatically submitted to WAWF-RA for the QAR's approval. The invoice data can also be downloaded for use in each manufacturer's internal accounting and/or production control systems.

- 4. The system can track payment status by combining the submitted invoice data with payment data that is extracted each morning from the DFAS payment system. The tracking can be done at the invoice level as well as at the CLIN level. Data can be sorted and displayed in multiple orders. An inquiry can be automatically submitted to DFAS by the vendor for any Invoice that does not appear in VPIS within a few days of submittal or for any Invoice that has an unpaid amount after 30 days.
- 5. Additional management data can be analyzed by either the manufacturer or by DSCP utilizing a "View Contract Shipments and Invoices" function.

2 Manufacturers with Warehousing Responsibilities

Manufacturers with warehousing responsibilities are called Bill and Hold contractors. Their manufacturing capabilities (see Figure 2-1) are nearly identical to those of the manufacturers identified in Section 1 of this document. The only difference between the two can be seen in function 3 where a MILSTRAP transaction "D4S" is automatically sent to SAMMS at DSCP whenever the manufacturer is shipping to themselves. The "D4S" informs SAMMS that the shipment has been received at the warehouse. It is sent automatically because the shipment never really goes anywhere. The shipment is kept by the manufacturer, who also manages the warehouse until the bill and hold contractor is told to ship some or all of the items to a specific location.

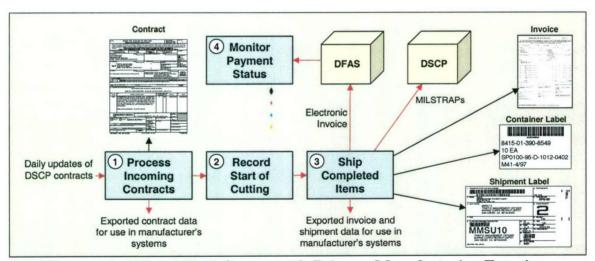


Figure 2-1: Bill and Hold Contractor's Primary Manufacturing Functions

In addition to their manufacturing activities, the bill and hold contractor has warehousing responsibilities for responding to orders and inquiries (see Figure 2-2). The specific warehousing capabilities of VIM-ASAP are as follows:

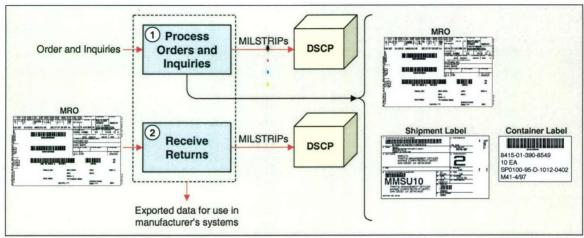


Figure 2-2: Bill and Hold Contractor's Primary Warehousing Functions

- 1. Orders and inquiries can be viewed and acted upon by the bill and hold contractor. Orders come in the form of an MRO to ship a quantity of a specific NSN to a particular location. Inquiries take many forms, but are primarily follow-up inquiries from the organization that created the original requisition. When acted upon, both orders and inquiries need to have a MILSTRIP transaction created to inform DSCP of the actions taken. VIM-ASAP is capable of formatting and transmitting these transactions automatically. When an order is being filled, the system can also prepare and print all of the required shipment documents, including a Material Release Order (DD Form 1348-1A), a Military Shipment Label (DD Form 1387), and whatever numbers of container labels are required for each individual container. These labels are formatted to fit on standard sheets of Avery labels, which can be used in any typical office printer. The data can also be downloaded for use in each manufacturer's internal accounting and/or production control systems. Additionally, data on all MROs processed through VIM-ASAP can be viewed or downloaded in Excel format to simplify monthly or quarterly transportation charges reconciliation.
- 2. Bill and hold contractors never receive shipments from other depots or manufacturers. They only receive manufacturing shipments from themselves. The MILSTRAP D4S has already been transmitted (upon generation of the DD 250). The data can be downloaded for use in each manufacturer's internal accounting and/or production control systems.

3 System Requirements

The following equipment and software is required to use VIM-ASAP:

- Computer: The computer requirements are a function of operating system and the version of the browser that is being used although the operating system must be MS Windows based. Microsoft provides minimum configuration information for their latest browser (IE 6.0) at http://www.microsoft.com/windows/ie/evaluation/sysreqs/default.asp. A general comment is that if the browser you selected runs on your computer, then VIM-ASAP will also run.
- Internet Connection: Any type of Internet connection will work although faster is always better. Phone modems at 64k bps will work fine in nearly all circumstances. Delays should only be noticeable when large numbers of shipping labels or container labels are required.
- **Printer**: Nearly any brand of printer can be used as long as it is either an ink jet or laser printer.
- Software: You will need to install Microsoft's Internet Explorer 6.0 and set the security level to no higher than "Medium". Users who prefer higher security settings are advised to add http://vim.ct-dscp.com to their list of "Trusted Sites," with security settings for the Trusted Zone set in accordance with the Lessons Learned notes on http://info.ct-dscp.com. Some versions of the browser do not contain all the needed additional software. If your version does not have everything that is needed, the system will automatically detect this and initiate a download of the required components. You will be asked to give permission for the download. Simply approve the download and everything that needs to be done will be done automatically. This will only happen the first time a missing component is discovered. Once downloaded, the component is permanently installed.

The two most common causes of slow VIM-ASAP performance are the speed of your modem and the amount of RAM you have on your computer. Adding additional RAM can typically be done for less than fifty dollars, and significantly improves performance. There are dozens of ways to improve communications speed. Your local Internet Service Provider or cable company can review what they have to offer. Satellite communications are also available in rural areas that do not have many other options. Each of the satellite companies can tell you about their services.

4 User Notices - Important

Item	Problem	Solution
1	There are problems with invoices for subsequent shipments after earlier shipments were within 2% of order quantity DFAS frequently close contracts whenever the received quantity gets within 2% of the order quantity. This also causes DSCP's contract data to be removed from their system (i.e., SAMMS). When this happens, VIM-ASAP can no longer be used to create DD250s for the last 2% of the order. Bypassing VIM-ASAP and sending a paper DD250 is not a solution to this problem. DFAS will not pay the invoice because they no longer have a record of the contract.	DSCP has stated that the <u>only</u> way to resolve this problem is for the manufacturer to contact their DSCP contracting officer to get the contract reinstated. Once this is done, VIM-ASAP and DFAS will have the data required to create and pay the DD250. DSCP is beginning to modify the method they use to code variances so that shipments within the variance percentage, but under the order quantity stay active in DFAS.

Appendix E

MILSTRIP and MILSTRAP Usage Rules

Replies		A61 – Material Release Denial AR0 – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested	A65 – Material Release Denial AR0 – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested	A6A – Material Release Denial AR0 – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested in ARB – Material Release Confirmation for quantity less than
Recognition Rules	Release/Redistribution Orders, Modifications, and Cancellations	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot. The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) has a RIC Overseas shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) has a POE in the DODAAC table Denials are sent when quantity set to zero by depot personnel 	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot. The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) has a RIC Overseas shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) has a POE in the DODAAC table There is a DOC_NR in the REDF that matches the DOCC_NR of the ARCS1 table odes: 2, 3, 4, 5, J, K, L, M, N, P, Q, or Z Denials are sent when quantity set to zero by depot personnel 	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) has a RIC Domestic shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) does not have a POE in the DODAAC table
Description	se/Redistribution Orders	Redistribution Order (RDO) for overseas shipment	Redistribution Order (RDO) for overseas shipment with exception data	Redistribution Order (RDO) for domestic shipment
DIC	Relea	A21	A25	A2A

DIC	Description	Recognition Rules	Replies
A2E	Redistribution Order (RDO) for domestic shipment with exception data	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) has a RIC Whenever the MEDIA_STAT_CD in the ARCS1 table has any of the following codes: 2, 3, 4, 5, J, K, L, M, N, P, Q, or Z There is a DOC_NR in the REDF that matches the DOC_NR of the ARCS1 table Denials are sent when quantity set to zero by depot personnel 	A6E – Material Release Denial ARO – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested
A51	Material Release Order for overseas shipment	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot. The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) does not have a RIC Overseas shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) has a POE in the DODAAC table Denials are sent when quantity set to zero by depot personnel 	A61 – Material Release Denial ARO – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested
A5A	Material Release Order (MRO) for domestic shipment	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) does not have a RIC Domestic shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) does not have a POE in the DODAAC table Denials are sent when quantity set to zero by depot personnel 	A6A – Material Release Denial ARO – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested

Replies	A6E – Material Release Denial ARO – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested	A65 – Material Release Denial AR0 – Material Release Confirmation ARA – Material Release Confirmation for quantity greater than requested ARB – Material Release Confirmation for quantity less than requested	AG6 – Reply to cancellation request
	A6E – Material Release Denial AR0 – Material Release Confir ARA – Material Release Confir for quantity greater than requested ARB – Material Release Confi for quantity less than requested	A65 – Material Release Denial AR0 – Material Release Confii ARA – Material Release Confiirequested ARB – Material Release Confiirequested for quantity less than requested	AG6 – Reply to
Recognition Rules	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) does not have a RIC Whenever the MEDIA_STAT_CD in the ARCS1 table has any of the following codes: 2, 3, 4, 5, J, K, L, M, N, P, Q, or Z There is a DOC_NR in the REDF that matches the DOC_NR of the ARCS1 table Domestic shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) does not have a POE in the DODAAC table Denials are sent when quantity set to zero by depot personnel 	 New DOC_NR appears in ARCS1 table where the RIC in the ARCS3 table identifies the current depot The DODAAC of the DOC_NR (unless SIGNAL_CD = J, K, L, or M, then use SUPP_ADDR as DODAAC) does not have a RIC Whenever the MEDIA_STAT_CD in the ARCS1 table has any of the following codes: 2, 3, 4, 5, J, K, L, M, N, P, Q, or Z There is a DOC_NR in the REDF that matches the DOC_NR of the ARCS1 table Overseas shipments are those where the DODAAC of the DOC_NR (or DODAAC of the SUPP_ADDR when SIGNAL_CD = J, K, L, or M) has a POE in the DODAAC table Denials are sent when quantity set to zero by depot personnel 	 The RIC of ARCS3 is the depot of interest The CANC_RQSTR_CD of the ARCS2 table is non-blank whenever a change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The cancelled order has not been shipped
Description	Material Release Order with exception data	Material Release Order for Overseas shipment with exception data	Cancellation (can be for MRO or RDO) from ICP to Storage
DIC	A5E	A55	AC6

March 5, 2001

DIC	Description	Recognition Rules	Replies
AC6	Cancellation (can be for MRO or RDO) from ICP to Storage	 The RIC of ARCS3 is the depot of interest The CANC_RQSTR_CD of the ARCS2 table is non-blank whenever a change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The cancelled order already been shipped (either exact, less than, or greater than originally ordered quantity) 	AU0 – Reply to Cancellation Request – Material Release Confirmation for release of material the same as requested AUA – Reply to Cancellation Request - Material Release Confirmation for release of material greater than requested AUB – Reply to Cancellation Request - Material Release Confirmation for release of material less than requested
AC7	Cancellation (Mass Cancellation - can be for MRO or RDO) from ICP to Storage	 The RIC of ARCS3 is the depot of interest The CANC_RQSTR_CD of the ARCS2 table is non-blank whenever a change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The cancelled order has not been shipped The AG6 reply is sent automatically if the cancellation was received prior to the order being shipped 	AG6 – Reply to cancellation request
AC7	Cancellation (Mass Cancellation - can be for MRO or RDO) from ICP to Storage	 The RIC of ARCS3 is the depot of interest The CANC_RQSTR_CD of the ARCS2 table is non-blank whenever a change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The cancelled order already been shipped (either exact, less than, or greater than originally ordered quantity) 	AU0 – Reply to Cancellation Request – Material Release Confirmation for release of material the same as requested AUA – Reply to Cancellation Request - Material Release Confirmation for release of material greater than requested AUB – Reply to Cancellation Request - Material Release Confirmation for release of material less than requested

Page 4 of 11

DIC	Description	Recognition Rules	Replies
AM1	Document Modifier for overseas shipment	 A change has occurred if the AavsStatusDate of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was an overseas MRO or RDO The DOC_NR has not yet been shipped 	AR9 – MRO confirmation reply to MRO Modifier
AM1	Document Modifier for overseas shipment	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was an overseas MRO or RDO The DOC_NR has already been shipped 	A61 – Material Release Denial if items already shipped
AM5	Document Modifier for Overseas shipment with exception data	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was an overseas MRO or RDO There is a DOC_NR in the REDF that matches the DOC_NR of the ARCS1 table The DOC_NR has not yet been shipped 	AR9 – MRO confirmation reply to MRO Modifier
AM5	Document Modifier for Overseas shipment with exception data	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was an overseas MRO or RDO There is a DOC_NR in the REDF that matches the DOC_NR of the ARCS1 table The DOC_NR has already been shipped 	A61 – Material Release Denial if items already shipped
AMA	Document Modifier for domestic shipment	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was a domestic MRO or RDO The DOC_NR has not yet been shipped 	AR9 – MRO confirmation reply to MRO Modifier
AMA	Document Modifier for domestic shipment	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was a domestic MRO or RDO The DOC_NR has already been shipped 	A61 – Material Release Denial if items already shipped

DIC	Description	Recognition Rules	Replies
AME	Document Modifier with exception data	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was a domestic MRO or RDO There is a DOC_NR in the REDF that matches the DOCC_NR of the ARCS1 table The DOC_NR has not yet been shipped 	AR9 – MRO confirmation reply to MRO Modifier
AME	Document Modifier with exception data	 A change has occurred if the STATUS_DT of the ARCS2 table has been changed from the prior download of the data The original DOC_NR was a domestic MRO or RDO There is a DOC_NR in the REDF that matches the DOCC_NR of the ARCS1 table The DOC_NR has already been shipped 	A61 – Material Release Denial if items already shipped
Follow-Ups	v-Ups		
AF1	Follow-up from requisitioner	 AF1 appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	AE1 – Supply Status
AF2	Follow-up from by supplemental address	 AF2 appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	AE2 – Supply Status
AF6	Follow-up from ICP	 AF6 appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	AE6 – Supply Status
AFC	Follow-up Request for Improved ESD	 AFC appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	AE1 – Supply Status
AFJ	Disposal Release Follow-up	 AFJ appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	AEJ – Disposal Supply Status
AFX	Disposal Shipment/Receipt Confirmation Follow-up	 AFX appears in the first three columns of COL_80 of VCSF table The requisition number and any suffix found in columns 30 through 44 match a prior requisition that was routed to the RIC of interest 	ASZ – Disposal Shipment Confirmation

Page 6 of 11

0			
מכ	Description	necognition rules	salidau
Arrival	of Shipments from Con	Arrival of Shipments from Contracts (does not apply to Bill & Hold Depots that use ASAP)	
None	Arrival of Shipment as directed by a contract (e.g., received using a DD250)	 Contract, Delivery Order, and CLIN from ACF table STG_LOC_RIC_2 of ACF is the depot of interest; or the first six characters of the DOC_NR is the depot's DODAAC; or the SUPP_ADDR is the depot's DODAAC if the SIGNAL_CD = J, K, L, or M for the DOC_NR in ARCS1 Position 2 and 3 of TYPE_DI = "DM" 	D4M – Material receipt as a return of repaired or tested item using a procurement instrument source
None	Arrival of Shipment as directed by a contract (e.g., received using a DD250)	 Contract, Delivery Order, and CLIN from ACF table STG_LOC_RIC_2 of ACF is the depot of interest; or the first six characters of the DOC_NR is the depot's DODAAC; or the SUPP_ADDR is the depot's DODAAC if the SIGNAL_CD = J, K, L, or M for the DOC_NR in ARCS1 The shipment comes from a manufacturer coded as government entity from CAGE table using DESIG code of "G" or "5" The DODAAC from the CAGE table does not start with a "G" but that does start with a letter 	D4U – Material receipt from procurement from DoD entity
None	Arrival of Shipment as directed by a contract (e.g., received using a DD250)	 Contract, Delivery Order, and CLIN from ACF table STG_LOC_RIC_2 of ACF is the depot of interest; or the first six characters of the DOC_NR is the depot's DODAAC; or the SUPP_ADDR is the depot's DODAAC if the SIGNAL_CD = J, K, L, or M for the DOC_NR in ARCS1 The shipment comes from a manufacturer coded as government entity from CAGE table using DESIG code of "G" or "5" The DODAAC from the CAGE table starts with a "G" or a number 	D4V – Material receipt from procurement from non-DoD government entity
None	Arrival of Shipment as directed by a contract (e.g., received using a DD250)	 Contract, Delivery Order, and CLIN from ACF table STG_LOC_RIC_2 of ACF is the depot of interest; or the first six characters of the DOC_NR is the depot's DODAAC; or the SUPP_ADDR is the depot's DODAAC if the SIGNAL_CD = J, K, L, or M for the DOC_NR in ARCS1 The shipment comes from a manufacturer coded as government entity from CAGE table using DESIG code of "G" or "5" The DODAAC from the CAGE table starts with a "G" or a number Position 1 and 2 of TYPE_DI = "TD" 	D4X – Material receipt from procurement from Decapitalization

Page 8 of 11

DIC	Description	Recognition Rules	Replies
None	Arrival of Shipment from a manufacturer who used ASAP to create the DD250 for the shipment	 Shipment, Contract, Delivery Order, and CLIN is from ASAPweb STG_LOC_RIC_2 of ACF is the depot of interest; or the first six characters of the DOC_NR is the depot's DODAAC; or the SUPP_ADDR is the depot's DODAAC if the SIGNAL_CD = J, K, L, or M for the DOC_NR in ARCS1 	D4S – Material receipt for procurement instrument from commercial source (DEFAULT if not rules are satisfied)
Arriva	Arrival of Shipments from Requisitions	uisitions	
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The TYPE_DI of the DUE Table is DFA, C, D or DFE The items are being returned from another DLA activity (i.e., DODAAC from DOC_NR that starts with an "S" or "U") 	D6A – Material receipt from non- procurement instrument as a return from other DLA activity
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The TYPE_DI of the DUE Table is DFA, C, D or DFE The items are being returned from a DoD, but non-DLA activity (i.e., DODAAC that does not start with an "S" or "U" or "G" but that starts with a letter) 	D6B – Material receipt from non- procurement instrument as a return from a non-DLA DoD activity
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M Position 3 of TYPE_DI = "D" First character of DOC_NR = B, D, K, P or T AND first character of SUPP_ADDR = "Y" 	D6D – Material receipt from non- procurement instrument as a return from a MAP Grant Aid activity
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M First character of DOC_NR = B, D, K, P or T AND Position 3 of TYPE_DI = "E" 	D6E – Material receipt from non- procurement instrument as a return from a FMS
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M Position 2 and 3 of TYPE_DI = "FM" 	D6G – Material receipt from non- procurement instrument as a return of unused material from destructive testing
None	Arrival of Shipment as directed by a requisition	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M Position 2 and 3 of TYPE_DI = "FH" 	D6H – Material receipt from non- procurement instrument as a return of unused GFM

Page 9 of 11

Replies	of the D6J – Material receipt from non- procurement instrument as a if return from property disposal in either	of the D6K – Material receipt for other than procurement instrument for relocation of assets remaining under control of the same item manager	of the D6L – Material receipt from non- procurement instrument as return from modification	of the D6T – Material receipt from non- procurement instrument from S" or requisition from other DLA site	of the D6U – Material receipt from non- procurement instrument from requisition from a non-DLA but other DoD activity	s of the D6V – Material receipt from non-procurement instrument from requisition from a non-DoD
Recognition Rules	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The DODAAC of the ARCS1 DOC_NR (or DODAAC in the SUPP_ADDR if DOC_NR DODAAC = "SC0100") uses "DRMO", "DRMS", or "reutilization" in either the Name or TAC1Title of the DODAAC table Position 2 and 3 of TYPE_DI = "FJ" 	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M Position 2 and 3 of TYPE_DI = "FK" 	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The RIC of ARCS3 is neither blank nor null Position 2 and 3 of TYPE_DI = "FL" 	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The items come from another DLA activity (e.g., DODAAC starts with an "S" or "U") Position 2 and 3 of TYPE_DI = "FA" 	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The items come from a DoD, but non-DLA activity (i.e., DODAAC that does not start with an "S" or "U" or "G" but that starts with a letter) Position 2 and 3 of TYPE_DI = "FB" 	 The depot of interest is identified by its DODAAC in the first six characters of the DOC_NR of ARCS1 or in the SUPP_ADDR if SIGNAL_CD = J, K, L, or M The items some from a para DODAAC that starts with a pumber.
Description	Arrival of Shipment as directed by a requisition	Arrival of Shipment as directed by a requisition	Arrival of Shipment as directed by a requisition	Arrival of Shipment as directed by a requisition	Arrival of Shipment as directed by a requisition	Arrival of Shipment as directed by a requisition
DIC	None	None	None	None	None	None

Page 10 of 11

DIC	Description	Recognition Rules	Replies
None	None Periodic contractual requirement that is initiated by the user based on a scheduled event	 User entries in the inventory count table along with the adjustment explanation and error classifications User entries in the inventory Adjustment (Increase) Usercease) 	D8_ – Inventory Adjustment (Increase) D9_ – Inventory Adjustment (Decrease)

Notes

1. Whenever the ADVICE_CD of ARCS1 is equal to "2D", the depot is required to ship the exact quantity requested. The quantity cannot be adjusted for unit pack.

Page 11 of 11

Appendix F

MILSTRIP and MILSTRAP Formats

DIC	Data Element	From Column	To Column	Special Rules*	Notes
D6_	All D6_ DICs	1	3		
	RIC	4	6		RIC of the DODAAC of the DOC_NR or the SUPP_ADDR if SIGNAL_CD = J, K, L, or M
	Leave Blank	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	SFX_CD	44	44		
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	DIST_CD	54	56		
	PROJECT_CD	57	59		
	Always Blank	60	66		
	RIC	67	69		RIC of receiving depot
	OP_CD	70	70		
	COND_CD	71	71		Entered by receiving organization from pull-down list of codes
	MGT_CD	72	72		
	Day of Year	73	75	Right justified, zero filled	
	Always Blank	76	80		

Note: All data is left justified, blank filled unless otherwise indicated (including all "Nulls" converted to blanks)

DIC	Data Element	From Column	To Column	Special Rules*	Notes
D4_	All D4_ DICs	1	3		
	RIC of ICP	4	6		RIC from DODAAC of DOC_NR that ordered the material. If DODAAC is null or blank, then set RIC to "S9T"
	Always Blank	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	PIIN	30	42		
	Always Blank	43	43		
	Always Blank	44	44		
	CLIN	45	50		
	Always Blank	51	53		
	DISTR_CD	54	56		
	PROJECT_CD	57	59		
	Shipment Number	60	66		Entered by receiving organization
	RIC of receiving organization	67	69		
	OP-CD	70	70		
	Condition Code	71	71		Supply condition selected by user from pull-down list
	MGMT_CD	72	72		
	Day of the Year	73	75	Right justified, zero filled	The day of the year that the MILSTRAP is generated
	Always Blank	76	76		
	CALL_NR	77	80		

DIC	Data Element	From	То	Special Rules*	Notes
		Column	Column		
D8_ & D9_	All D8_ and D9_ DICs, except D8E, D8F, D8S, D9E, D9F, D9S	1	3		
	RIC of ICP	4	6		RIC set to "S9T" for DSCP
	Always Blank	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	Quantity to increase or decrease (do not use negative sign for decrease)
	DOC_NR	30	43	?????	If this is driven by the calendar, then there is no DOC_NR
	SFX_CD	44	44	?????	If this is driven by the calendar, then there is no SFX_CD
	Always Blank	45	51		
	Always Blank	52	53		
	Always Blank	54	56		
	Always Blank	57	59 •		
	Always Blank	60	62		
	Error Classification	63	64		Set by the user using a pull-down list
	Always Blank ???	65	65	Does DLA use this error classification?	
	Always Blank	66	66		
	RIC	67	69		RIC of depot making the adjustment
	Always Blank	70	70		
	Always Blank	71	71		
	Always Blank	72	72		
	Day of the year	73	75	Right justified, zero filled	Julian day of the year that this transaction was generated
	Always Blank	76	80		

DIC	Data Element	From Column	To Column	Special Rules*	Notes
A2A	A2A	1	3		
	RIC	4	6		RIC of depot or bill and hold contractor that is will fill the order
	MEDIA_STAT_CD	7	7		Always "S" (100 % supply status and shipment to requisitioner)
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43	1	
	DMD_CD ?	44	44		???????????
	SUPP_ADDR	45	50		Always blank for replenishment orders from depots
	SIGNAL_CD	51	51		Always set to "D", i.e., free-issue
	FUND_CD	52	53		Always set to "00"
	DIST_CD	54	56		?????????
	PROJECT_CD	57	59		Lion Vallen is always set to "EDI"
	PRIORITY_CD	60	61		Lion Vallen is always set to "06"
	RDD	62	64	Right justified, zero filled	Lion Vallen is always either null or "S24"
	ADVICE_CD	65	66		Always set to "27"
	Date of Receipt of Requisition	67	69		Leave Blank
	Ownership	70	70	????????	
	Supply Condition	71	71	?????????	
	System Management	72	73	????????	
	RIC of requestor	74	76		
	Inventory Control Data	77	80	???????????	

DIC	Data Element	From Column	To Column	Special Rules*	Notes
A6_	All A6_ DICs except A6J	1	3	A61 – overseas shipment A65 – overseas shipment with exception data A6A – domestic shipment A6E – domestic shipment with exception data	Material Release Denial
	RIC of ICP	4	6	Always "S9T"	RIC from DODAAC of DOC_NR that ordered the material. If DODAAC is null or blank, then set RIC to "S9T"
	MEDIA_STAT_CD	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled Requested Qty – Shipped Qty	
	DOC_NR	30	43		
	SFX_CD	44	44		
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53	9	
	DIST_CD	54	56		
	PROJECT_CD	57	59		
	PRIORITY_CD	60	61		
	RDD	62	64	Right justified, zero filled	
	ADVICE_CD	65	66		
	RIC	67	69		RIC of the depot sending this transaction
	OP_CD	70	70		
	COND_CD	71	71		Entered by sending organization from pull-down list of codes
	MGT_CD	72	72		
	Always Blank	73	80		

DIC	Data Element	From Column	To Column	Special Rules*	Notes
A6J	A6J	1	3		Disposal Release Denial
	RIC of ICP	4	6	Always "S9T"	RIC from DODAAC of DOC_NR that ordered the material. If DODAAC is null or blank, then set RIC to "S9T"
	MEDIA_STAT_CD	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	
	Retention Quantity	45	51	Right justified, zero filled	The only reason for a disposal release order denial is that there are none on hand. Therefore, this will be set to zero. On hand qty from NIR2
	FUND_CD	52	53		
	DIST_CD	54	54	Always "9"	Mike, this is always "9" in ARL, so I defaulted it here also. Doina
	Leave Blank	55	56		
	Denial Date	57	59	Right justified, zero filled	The day of the year that the MILSTRAP is generated
	Leave Blank	60	66		
	RIC	67	69		RIC of receiving depot
	OP_CD	70	70		
	COND_CD	71	71		Entered by receiving organization from pull-down list of codes
	MGT_CD	72	72	Always blank	
	Leave Blank	73	80		

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AF_	All AF_s	1	3		
	RIC	4	6		RIC that was assigned responsibility for the requisition
	MEDIA_STAT_CD	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	DMD_CD	44	44		Doina -this is in the ARCS1, but we are not currently getting this
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	DIST_CD	54	54		
	Leave Blank	55	56		1
	PROJECT_CD	57	59		
	PRIORITY_CD	60	61		
	RDD	62	64		
	ADVICE_CD	65	66		
	Blank	67	69		
	Blank	70	80		

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AG6	AG6	1	3		Material Release Cancellation Reply
	RIC of ICP	4	6	Always 'S9T'	RIC from DODAAC of DOC_NR that ordered the material. If DODAAC is null or blank, then set RIC to "S9T"
	MEDIA_STAT_CD	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	Cancellation qty
	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	
	Always Blank	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	DIST_CD	54	56		
	PROJECT_CD	57	59		
	PRIORITY_CD	60	61		
	RDD	62	64	Right justified, zero filled	
	ADVICE_CD	65	66		
	RIC	67	69		RIC of the depot sending this transaction
	Always Blank	70	80		

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AGJ	AGJ	1	3		Disposal Release Cancellation Reply
	RIC of ICP	4	6		RIC from DODAAC of DOC_NR that ordered the material. If DODAAC is null or blank, then set RIC to "S9T"
	MEDIA_STAT_CD	7	7 :		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
6	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	Distribution	54	54	Always "9"	
	Quantity on hand	55	61	Right justified, zero filled	Total quantity currently on hand at this RIC
	Precious Metals Indicator	62	62	Always "A", i.e., no known precious metal	
	ADPE Identification	63	63	Always "0", i.e., no ADPE	
	DEMIL_CD	65	65		
	Reclamation	66	66	Always "N", i.e., reclamation not required	
	OP_CD	70	70		
	COND_CD	71	71		Entered by receiving organization from pull-down list of codes
	MGT_CD	72	72		
	Flight Safety Critical Aircraft Parts	73	73	Always Blank	
	ARCS1_UP	74	80		Unit price

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AR_ & AU_	ARO, ARA, & ARB AUO, AUA, & AUB	1	3		Material Release Confirmation
	RIC	4	6		The RIC of the DODAAC of the DOC_NR or the SUPP_ADDR if SIGNAL_CD = J, K, L, or M
	MEDIA_STAT_CD	7	7		
	NSN	8	22 •		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	????? Why ?????
	SUPP_ADDR	45	50		×
	HOLD_CD	51	51		
	FUND_CD	52	53		
	POE (Port of Embarkation)	54	56		Leave blank except for OCONUS destinations.
	Date Shipped	57	59	Right justified, zero filled	Julian day
	TCN	60	76		Determined by code that generates the shipping label (DD 1387)
	Mode of Shipment	77	77		Set by user using pull- down list when preparing shipping label
	Date Available for Shipment	78	80	Right justified, zero filled	Set to Date Shipped

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AR_	ARJ, ARK, & ARL	1	3	ARJ: ship qty = req qty ARK: ship qty > req qty ARL: ship qty < req qty	Disposal Release Confirmation
	RIC of ICP	4	6	"S9T"	
	MEDIA_STAT_CD	7	7		ARCS1
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	Shipped qty
	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	
	Retention Quantity	45	51 •	Right justified, zero filled	Calculated by subtracting the shipped QTY from the current on-hand inventory level; changed to use NIR2 qty
	FUND_CD	52	53		ARCS1
	DIST_CD	54	54	Always "9"	
	Always Blank	55	56		
	Ship Date	57	59	Right justified, zero filled	Today's Julian day of year
	Always Blank	60	61		Ē
	Precious Metals Indicator	62	62	Always "A", i.e., no known precious metal	
	ADPE Identification	63	63	Always "0", i.e., no ADPE	9
	Disposal Authority	64	64	Always set to "M"	
	STATUS_CODE	65	66	Always set to "DG"	
	RIC	67	69		RIC of the depot sending this transaction
	OP_CD	70	70		ARCS3
	COND_CD	71	71		ARCS3
	MGT_CD	72	72	Always blank	ARCS3 is always blank
	Always Blank	73	80		

Last saved by Mike O'Connell

Page 11

06/29/2004 8:51 AM

DIC	Data Element	From Column	To Column	Special Rules*	Notes
AE_	All AE_s	1	3		Supply Status Replies
	RIC of ICP	4	6	"S9T"	
	MEDIA_STAT_CD	7	7		
	NSN	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	SFX_CD	44	44		
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	DIST_CD	54	56		
	PROJECT_CD	57	59		
	PRIORITY_CD	60	61		
	Transaction Date	62	64	Right justified, zero filled	Today's Julian day of the year
	Status	65	66		The user defines the status of the requisition using a pull-down list of valid codes
	RIC	67	69		RIC of depot sending this reply
	Shipping Date	70	73	Right justified, zero filled of the form YDDD	This is either the actual shipped date or the planned ship date as entered by the user
	Always Blank	74	80		

Last saved by Mike O'Connell

Page 12

06/29/2004 8:51 AM

DIC	Data Element	From Column	To Column	Special Rules*	Notes

DIC	Data Element	From Column	To Column	Special Rules*	Notes
ASZ	ASZ	1	3		Disposal Shipment Confirmation
	RIC of ICP	4	6	"S9T"	
	MEDIA_STAT_CD	7	7		
	NSN,	8	22		
	UI	23	24		
	QTY	25	29	Right justified, zero filled	
	DOC_NR	30	43		
	SFX_CD	44	44	Leave Blank	
	SUPP_ADDR	45	50		
	SIGNAL_CD	51	51		
	FUND_CD	52	53		
	DIST_CD	54	54	Always "9"	
	Always Blank	55	64		
	ADVICE_CD	65	66		
	Always Blank	67	80		

Appendix G

VIM-ASAP Implementation Status

VIM-ASAP Implementation Status

5/26/2004

The companies in the table below are all production users of VIM-ASAP. Seventy-two of the eighty-seven (83%) companies use the WAWF-RA interface to process their DD250s. The remaining fifteen use WInS and will continue to do so until their QAR is ready to start using WAWF-RA. Each company's QAR drives the decision to convert from WInS to WAWF-RA.

	VIM-SAP Production Companies	CAGE	WAWF-RA
1.	AC Inc.	9Y595	X
2.	Action Embroidery Corp	75556	
3.	Alabama Institute For Deaf And Blind	6B775	X
4.	Albest Metal Stamping Corp.	4J765	
5.	Alphasoft Wearables LLC	1W2C8	X
6.	Altama Delta Corporation	02LQ6	X
7.	American Apparel Inc	0B419	X
8.	American Power Source Inc	03FY4	X
9.	Anchor Industries Inc.	4M381	X
10.	Apparel Manufacturing Corp	0N1T2	
11.	Ashland Sales And Service Co	6B277	X
12.	Atlas Headwear Inc	2V040	X
13.	Belleville Shoe Mfg. Co.	90976	X
14.	Bernard Cap Company Inc.	63954	X
15.	Blind Enterprises Of Oregon	0TYB5	X
16.	Bremen-Bowdon Investment Company	0K0X2	X
17.	Breton Industries Inc	54799	X
18.	Brookline Inc	1RNY7	X
19.	C & C Metal Products Corporation	08CT5	
20.	Camel Manufacturing Company Inc.	80515	X
21.	Capps Shoe Company	1B5D1	X
22.	Caribbean Needle Point Inc	1DEG6	X
23.	Choctaw Mfg. Co. Inc.	5A271	X
24.	Coastalenterprises Of Jacksonville	8T532	X
25.	Columbia Sewing Co Inc	1XFJ6	X
26.	Conrad Industries	4M221	X
27.	Creative Apparel Assoc	0GBF3	X
28.	Crown Clothing Co	0B5C5	X
29.	Derossi & Son Co Inc	6A315	
30.	DJ Manufacturing, Corp.	0C5G5	X
31.	Dorothea Knitting Mills U.S. Limited	1VCF0	X
32.	Dow Cover Co Inc	33514	X
33.	EA Industries Inc	8U017	Х
34.	Elder Hosiery Mills Inc	9E058	Х

VIM-ASAP Implementation Status 5/26/2004

	VIM-SAP Production Companies	CAGE	WAWF-RA
35.	Equa Industries Division Of Propper	8W919	Х
36.	Eveready Embroidery Inc.	7A611	Х
37.	Front Line Apparel Group	1V1H2	
38.	Golden Manufacturing Co Inc	2S952	Х
39.	Goodwill Industries Of South Florida	3Z771	Х
40.	Graco Awards Inc.	6Y663	Х
41.	Guardian Manufacturing Company	01FK6	Х
42.	Hawkeye Glove Mfg	1CB38	Х
43.	Human Technologies Corp	9N049	X
44.	Ira Green Inc.	7H062	X
45.	J.H. Rutter-Rex Mfg. Co. Inc.	2A091	Х
46.	Jensen Promotional Items Inc	1SKL3	Х
47.	Lions Industries For The Blind Inc	1S034	Х
48.	M & B Headwear Company Inc	2A750	X
49.	M J Soffeco	2A769	
50.	Mauney Hosiery Mills Inc	60688	
51.	Meke Corp	1W1J1	X
52.	Middle Georgia Diversified ,	1Q917	X
53.	Mount Rogers Csb	2V662	Х
54.	Nationwide Glove Co Inc	6K235	X
55.	NCED	1A9C2	X
56.	New Maryland Clothing Mfg Inc	6F063	X
57.	New World Leather Corp	3ERF5	
58.	Northeastern Assoc. Of The Blind	4W353	
59.	Olympic Mills	3S812	
60.	Omega Apparel Incorporated	0ZTF7	X
61.	ORC Industries Inc	8M926	
62.	Outdoor Venture Corporation	1M877	X
63.	Patriot Industries Inc.	1SFM6	X
64.	Peckham Vocational Industries	4Z048	X
65.	Princess Knitwear Inc	1VR33	X
66.	Propper International Inc.	8A749	X
67.	Racoe Inc	1WWD8	X
68.	Raleigh Lions Clinic For The Blind	6H438	X
69.	Sam Bonk Uniform Cap Co Inc.	3A943	X
70.	Scottcraft Monogramming	0ZZ02	X
71.	Seneca Cayuga County Chapter NYSARC	0BSY7	X
72.	Sidran Inc.	5A378	
73.	Southeastern Kentucky Rehabilitation	2Z957	X

VIM-ASAP Implementation Status 5/26/2004

VIM-SAP Production Companies	CAGE	WAWF-RA
74. Southside Training Employment	070D2	X
75. Special T Hosiery Mills Inc	039P8	
76. Standard Manufacturing Co Inc	0FSP5	X
77. Tennessee Apparel Corp.	9A180	X
78. Tennier Industries Inc	2T217	X
79. Tradewinds Rehab Center Inc.	0BRB3	X
80. Travis Assn For The Blind	1B006	
81. Tullahoma Industries LLC	1NTN6	X
82. Uniart Corp	02LZ4	X
83. Unicor / Federal Prison Industries	82125	X
84. Valley Apparel LLC	1SSG5	X
85. Winston-Salem Industries For The	6A851	X
86. WL Gore & Associates Inc	1UE23	X
87. Wolverine World Wide Inc	9U907	X

Appendix H

ARN Security Analysis and Testing

1.0 ARN Security 01: Network Discovery/Early Exploit Detection

1.1 Method

(medium) Nmap 3.00 (Networked Messaging Application Protocol)

1.1.1 Operating System

RedHat Linux 8.0 - 2.4.0.26 kernel

1.1.2 Report

- 1. Starting Nmap V. 3.00 (www.insecure.org/nmap/)
- 2. Interesting ports on (65.160.126.140):
 - a. (The 1599 ports scanned but not shown below are in state: filtered)
- 3. 80/tcp open http (Transmission Control Protocol)
- 4. 443/tcp open https
- 5. Nmap run completed -- 1 IP address (1 host up) scanned in 171 seconds

1.1.3 Findings

- 1. HTTP and HTTPS are allowable. Filtering on all other ports.
- 2. Suspect URL Scan 2.1 and some attempts to harden OS.
- 3. Parent Pathing seems to be allowed. This is a Known exploit, and further testing will confirm.
- 4. Further script attempts may prove to not be "friendly".
- 5. Partial scan. Not all ports to 65335 tested

1.2 Method

(low-tech) Netcraft.com inquiry

1.2.1 Operating System

MacOSX 10.2.8

1.2.2 Internet Browser

Safari 1.0 (Build 85.5)

1.2.3 Report

os	Server	Last Changed	IP Address	Netblock Owner
Windows 2000	IIS 5.0	10/06/2003	65.160.126.140	PDIT/Modulant
Windows 2000	IIS 5.0	05/28/2002	208.3.92.65	PDIT
Windows NT4	IIS 4.0	12/13/2000	208.3.92.65	PDIT

Appendix H - ARN Security Analysis and Testing

1.2.4 Findings

IP address, Netblock Owner, possible IP Gamut.

1.3 Method

(medium) Network Discovery Tool

1.3.1 Operating System

MacOSX 10.2.8

1.3.2 Report

Ports 80/tcp and 443/tcp open, return arguments.
Ports 25/tcp and 1025/tcp do not respond to long/verbose echo direct attempt.

1.3.3 Findings

- 1.3.3.1 Telnet GET/Post has yet to be attempted on ports 80/tcp and 443/tcp. Expect verbose error if method not allowed.
- 1.3.3.2 Noticed that I was able to connect to NETBIOS via POSIX.dll (seemingly) being on machine; further tests will confirm.
- 1.3.3.3 WebDAV, a known exploit, is present. Further testing will confirm if RBUpdate.exe, MSDAIPP.dll and MSDAURL.dll are current versions.
- 1.3.3.4 Further testing to complete will show any other directly exploited OS restrictions and IIS patches that were neglected. However, testing with certain scripts will interfere with production. Will warn per request.
- 1.3.3.5 Research into overcoming URLScan initiated

1.4 Conclusion

So far, this is a rather tight machine; however, filtering may not prevent all future exploits.

2.0 ARN Security 02: IIS Script and Exploit Detection

2.1 Method

(high) Script and Admin Script Detection

2.1.1 Operating System

MacOSX 10.2.8

2.1.2 Internet Browser

Safari 1.0 (Build 85.5)

Appendix H - ARN Security Analysis and Testing

2.1.3 Report

Via simple URL, parameterized queries tested to see if Administration and Server Scripts were present, and if IUSR and IWAM accounts were disallowed the ability to affect files outside of C:\inetpub\wwwroot.

(ex.~/scripts/..%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0%af...%c0

2.1.4 Findings

Scripts did not execute.

2.2 Method

(medium) Script and Admin Script Detection

2.2.1 Operating System

MacOSX 10.2.8

2.2.2 Internet Browser:

Safari 1.0 (Build 85.5)

2.2.3 Report

Via simple URL queries, Administration Scripts were probed for their existence.

2.2.4 Findings

Scripts were not available.

2.3 Method

(medium) IIS Admin HTML site

2.3.1 Operating System

MacOSX 10.2.8

2.3.2 Internet Browser

Safari 1.0 (Build 85.5)

2.3.3 Report

Via browser, check for Admin HTML Panel (IIS) existence.

2.3.4 Findings

Suspect URL Scan intercepted HTTP requests; however, Admin site may not be present. Inconclusive findings.

2.4 Method

(medium) Script and Admin Script Detection

Appendix H - ARN Security Analysis and Testing

2.4.1 Operating System

Windows XP SP1

2.4.2 Report

Via browser, check for Admin HTML Panel (IIS) existence.

2.4.3 Findings

Same as above.

2.5 Conclusion

Machine is not susceptible to simple script and remote execute attempts. That's a good thing.

3.0 ARN Security 03: ARN Security Summary

This is not standard install or out of the "box" install and the IIS is rather insecure. Index.asp has been switched to a more cryptic 1nd3x.asp, and does not seem to be responsive to remote script manipulation. Nor does the machine seem to lacking any major updates for IIS 5.0.

However, Parent Paths may be present and active. This is a possible exploit and can provide an attacker the ability to access any location where virtual directories are located; which are usually outside of C:\Inetpub.

I suspect that the IIS is still on the C:\ drive. Even though IUSR and IWAM accounts are restricted via URLScan/IISLockdown, they still have rights on the machine due to them "Acting as part of the OS" and "As Services" via Local Security Policy settings.

The machine is indeed using a certificate; however, Verisign certificates have been proven to be responsive to even faked CA's (certificate authority). These types of exploits are usually derived from viewing sites via Internet Explorer, and the exploit being on the remote server.

Brute force tactics as "Denial of Service" or "Buffer Overflow" were not tested. In some cases, these have been proven to be an IIS issue. With updates even up to MS03-045 at the time of writing, there are still about four IIS issues that remain unanswered. Half of these aforementioned issues have yet to be patched, and these can lead to Buffer Overflow errors where IIS will be compromised.

Nor where any of the newer .NET exploits attempted. Version 1.1 resolved most C# remote exploits of 1.0.3705. This was an issue if .NET was indeed in the path, or ASPNET was taken out of the guest group and allowed to logon locally – it is denied Logon Locally via Local Security Policy Rights by default.

Overall, objectively this is a secure install that is at risk to higher level attempts that do not regard the production status of the machine. Brute force exploit (script and buffer

Appendix H – ARN Security Analysis and Testing

overflow) attempts that would have been more conclusive were not performed due to the consideration that the target machine was indeed a production machine.

Appendix I

VIM-ASAP Data Exporting

Downloadable Reports

1.0 Overview

Downloadable reports system supports data exchange from Virtual Item Manager – Automated Supplier Apparel Production (VIM-ASAP) to those clothing and textiles manufacturers who currently have in-house applications with which they wish to integrate data collected in VIM-ASAP.

With the downloadable reports the user is able to download data extractions on a scheduled, unattended basis for incorporation into their in-house systems. The data is downloaded as a report formatted in an XML file. The user is responsible for any conversion or "glue code" to import the data into the in-house system.

To use this feature your company must use the VIM-ASAP system to process DD250s and MROs and you must have some background with XML.

2.0 Steps to implement:

- 1. Obtain a login
- 2. Download the downloader
- 3. Configure the downloader
- 4. Schedule the downloader

3.0 Obtain a login

Contact the ARN help desk by phone at 866-276-3375 (866-ARN-DESK) or by email at vim-asap@ct-dscp.com. Let them know that you need a login for unattended report download. Your company must already be on-line with VIM-ASAP.

4.0 Download the downloader

[TBD]

5.0 Configure the downloader

The downloader is configured through an XML file created by the user to control the download process. This XML file contains any input parameters the report requires as well as the path and filename within the local file-system to save the downloaded report.

5.1 Configuration Document Type Definition

The Document Type Definition (DTD) for the XML configuration file is as follows:

- <!ELEMENT reportsDownload (reports?)>
- <!ELEMENT reports (report*)>
- <!ELEMENT report (parameters, saveAs)>

Appendix I – VIM-ASAP Data Exporting

```
<!ELEMENT parameters (parameter*)>
<!ELEMENT parameter (#PCDATA)>
<!ELEMENT saveAs (#PCDATA)>
<!ATTLIST report name CDATA #REQUIRED>
<!ATTLIST parameter name CDATA #REQUIRED>
```

Based on this definition, a configuration file might contain the following:

```
<?xml version="1.0"?>
<!DOCTYPE reportsDownload
   <!ELEMENT reportsDownload (reports?)>
   <!ELEMENT reports (report*)>
   <!ELEMENT report (parameters, saveAs)>
   <!ELEMENT parameters (parameter*)>
   <!ELEMENT parameter (#PCDATA)>
   <!ELEMENT saveAs (#PCDATA)>
   <!ATTLIST report name CDATA #REQUIRED>
   <!ATTLIST parameter name CDATA #REQUIRED>
1>
<reportsDownload>
   <reports>
       <report name="ShippedDD250s">
          <parameters>
              <parameter name="StartDate">01/24/2004</parameter>
              <parameter name="EndDate">01/31/2004</parameter>
          </parameters>
          <saveAs>
              C:\Downloads\2004 01 31\ShippedDD250s_2004_01_31.xml
       </report>
   </reports>
</reportsDownload>
```

5.2 Date Functions

Since report queries often involve dates such as starting date and ending date, the downloadable reports system provides a mechanism to dynamically generate date strings. A user can utilize the date functions to generate dates for input parameters or as a means to organize files and/or folders within their local file-system.

The provided date function, GetDate(FormatString) returns a date-time string formatted according to the user specified FormatString. FormatString is made up of the following format substrings:

Appendix I - VIM-ASAP Data Exporting

• Any combination of the following:

•	YYYY	four digit year
	YY	two digit year
	MM	two digit month
	DD	two digit day of the month
		11 1 1 0 1 1

HH two digit day of the month
HH two digit hour of the day
NN two digit minute of the current

NN two digit minute of the current timeSS two digit second of the current time

• Optionally, the above combinations can be separated with any of the following:

```
/ slash character
- hyphen character
- under-score character
- period character
```

The default FormatString is "MM/DD/YYYY". Using the format definition above and assuming that the current time is 2:15:10 PM on March 11, 2004:

- GetDate(YYY) will generate "syntax error"
- GetDate(YYYY) will generate "2004"
- GetDate(YYYY-MM-DD) will generate "2004-03-11"
- GetDate(YYYYMMDD) will generate "20040311"
- GetDate(HH.NN.SS) will generate "14.15.10"

GetDate also supports date arithmetic as follows:

```
GetDate() [+|- NumberOfDays]
```

The expressions within the above square brackets "[]" are optional. The vertical bar "|" is indicates "OR".

For example (with today being March 11, 2004):

- GetDate() will generate "03/11/2004"
- GetDate() 1 will generate "03/10/2004"
- GetDate() 7 will generate "03/04/2004"
- GetDate() 365 will generate "03/12/2003"

When using these date functions within the XML configuration file, they must be enclosed within square brackets "[]" to denote that they are special functions.

For example:

- <parameter name="startDate">[getDate() 7]</parameter>
- <saveAs>C:\Reports\ShippedMRO_[getDate()].xml</saveAs>

Using the date/time functions in the example file from above, a configuration file might contain the following:

Appendix I - VIM-ASAP Data Exporting

```
<!DOCTYPE reportsDownload
[
   <!ELEMENT reportsDownload (reports?)>
   <!ELEMENT reports (report*)>
   <!ELEMENT report (parameters, saveAs)>
   <!ELEMENT parameters (parameter*)>
   <!ELEMENT parameter (#PCDATA)>
   <!ELEMENT saveAs (#PCDATA)>
   <!ATTLIST report name CDATA #REQUIRED>
   <!ATTLIST parameter name CDATA #REQUIRED>
]>
<reportsDownload>
   <reports>
       <report name="ShippedDD250s">
           <parameters>
              <parameter name="StartDate">[getDate() - 7]</parameter>
              <parameter name=" EndDate ">[getDate()]</parameter>
           </parameters>
           <saveAs>
              C:\Downloads\
[GetDate(yyyy_mm_dd)]\ShippedDD250s_[GetDate(yyyy_mm_dd)].xml
           </saveAs>
       </report>
   </reports>
</reportsDownload>
```

6.0 Schedule the downloader

There are a great many ways to schedule the downloader. Some examples include, the Windows Task Scheduler and the SQL Server Agent Jobs scheduler. There are also a large number of packages from other vendors that accomplish this task. It is up to you to understand how to configure the scheduler you choose.

Active Contracts Report

7.0 Overview

Using the un-attended reports download program, which can be downloaded from Vim-Asap Info. site, and an input XML document, you can have information regarding your active contracts downloaded and saved to your local file directory on a scheduled basis and without any user interaction. This document will present the structure of the input XML document and provide you the necessary data, e.g.: report name and input parameters, to create an XML document requesting reports on your active contracts.

7.1 Report Name

The requesting XML document must contain a unique report name identifying which report to download. For active contracts report, its name is "UnattendedViewActiveContracts."

7.2 Input Parameters

None.

7.3 Return

An XML document will be returned and saved to your specified "saveAs" location. If currently there are active contracts, a XML document will be returned. If there are no active contracts, the following XML will be returned:

7.4 Creating Request XML Document

In order for the un-attended reports download program to perform correctly, it requires an input XML document, which provides details such as the requesting report name, input parameters, and the location to save the downloaded report. The expected input XML document must adhere to the following document type definition (DTD):

```
<!ELEMENT reportsDownload (reports)>
<!ELEMENT reports (report+)>
<!ELEMENT report (parameters, saveAs)>
<!ELEMENT parameters (parameter*)>
<!ELEMENT parameter (#PCDATA)>
<!ELEMENT saveAs (#PCDATA)>
<!ATTLIST report name CDATA #REQUIRED>
<!ATTLIST parameter name CDATA #REQUIRED>
```

As stated in the above DTD, the input XML document has <reportsDownload> element as its root. And this <reportsDownload> root element has a single <reports> child element. Within the <reports> element, it must have one or more <report> elements; where each <report> element stores input data for its corresponding requesting report.

Appendix I - VIM-ASAP Data Exporting

Within the <parameters> element, there can be zero or more <parameter> elements. If there are any required parameters listed under "Input Parameters" section above, then there has to be at least that many <parameter> elements. Each <parameter> element must contain a "name" attribute, whose value is one of those listed under the "Input Parameters" section. For active contracts, there shall be no <parameter> elements.

Lastly, the <saveAs> element holds the path to where the downloaded report will be saved.

Following is an example input XML document requesting active contracts:

```
<?xml version="1.0" ?>
<!DOCTYPE reportsDownload
[
  <!ELEMENT reportsDownload (reports)>
  <!ELEMENT reports (report+)>
  <!ELEMENT report (parameters, saveAs)>
  <!ELEMENT parameters (parameter*)>
  <!ELEMENT parameter (#PCDATA)>
  <!ELEMENT saveAs (#PCDATA)>
  <!ATTLIST report name CDATA #REQUIRED>
  <!ATTLIST parameter name CDATA #REQUIRED>
]>
  <reportsDownload>
     <reports>
        <report name="UnattendedViewActiveContracts">
           <parameters />
      <saveAs>c:\Reports\ActiveContracts\[GetDate(YYMMDD)].xml</saveAs>
         </report>
     </reports>
   </reportsDownload>
```

Note the use of GetDate() function; please refer to the un-attended download program's documentation for usage details.

Open MROs Report

8.0 Overview

Using the un-attended reports download program, which can be downloaded from Vim-Asap Info. site, and an input XML document, you can have information regarding your opened MROs downloaded and saved to your local file directory on a scheduled basis and without any user interaction. This document will present the structure of the input XML document and provide you the necessary data, e.g.: report name and input parameters, to create an XML document requesting reports on your opened MROs.

8.1 Report Name

The requesting XML document must contain a unique report name identifying which report to download. For opened MROs report, its name is "UnattendedViewOpenMROs."

8.2 Input Parameters

None.

8.3 Return

An XML document will be returned and saved to your specified "saveAs" location. If currently there are opened MROs, a XML document will be returned. Otherwise, If there are no opened MROs, the following XML will be returned:

8.4 Creating Request XML Document

In order for the un-attended reports download program to perform correctly, it requires an input XML document, which provides details such as the requesting report name, input parameters, and the location to save the downloaded report. The expected input XML document must adhere to the following document type definition (DTD):

```
<!ELEMENT reportsDownload (reports)>
<!ELEMENT reports (report+)>
<!ELEMENT report (parameters, saveAs)>
<!ELEMENT parameters (parameter*)>
<!ELEMENT parameter (#PCDATA)>
<!ELEMENT saveAs (#PCDATA)>
<!ATTLIST report name CDATA #REQUIRED>
<!ATTLIST parameter name CDATA #REQUIRED>
```

As stated in the above DTD, the input XML document has <reportsDownload> element as its root. And this <reportsDownload> root element has a single <reports> child element. Within the <reports> element, it must have one or more <report> elements; where each <report> element stores input data for its corresponding requesting report.

Appendix I - VIM-ASAP Data Exporting

Each <report> element must have a "name" attribute. For opened MROs, the report's "name" attribute value shall be "UnattendedViewOpenMROs." In addition, a <report> element must contain exactly one element and exactly one <saveAs> element.

Within the <parameters> element, there can be zero or more <parameter> elements. If there are any required parameters listed under "Input Parameters" section above, then there has to be at least that many <parameter> elements. Each <parameter> element must contain a "name" attribute, whose value is one of those listed under the "Input Parameters" section. For opened MROs, there shall be no <parameter> elements.

Lastly, the <saveAs> element holds the path to where the downloaded report will be saved.

Following is an example input XML document requesting opened MROs:

```
<?xml version="1.0" ?>
<!DOCTYPE reportsDownload
[
  <!ELEMENT reportsDownload (reports)>
  <!ELEMENT reports (report+)>
  <!ELEMENT report (parameters, saveAs)>
  <!ELEMENT parameters (parameter*)>
  <!ELEMENT parameter (#PCDATA)>
  <!ELEMENT saveAs (#PCDATA)>
  <!ATTLIST report name CDATA #REQUIRED>
  <!ATTLIST parameter name CDATA #REQUIRED>
]>
   <reportsDownload>
      <reports>
         <report name="UnattendedViewOpenMROs">
            <parameters />
            <saveAs>c:\Reports\OpenMROs\[GetDate(YYMMDD)].xml</saveAs>
         </report>
      </reports>
   </reportsDownload>
```

Note the use of GetDate() function; please refer to the un-attended download program's documentation for usage details.

Shipped DD250 Report

9.0 Overview

Using the un-attended reports download program, which can be downloaded from Vim-Asap Info. site, and an input XML document, you can have information regarding your shipped DD250s downloaded and saved to your local file directory on a scheduled basis and without any user interaction. This document will present the structure of the input XML document and provide you the necessary data, e.g.: report name and input parameters, to create an XML document requesting reports on your shipped DD250s.

9.1 Report Name

The requesting XML document must contain a unique report name identifying which report to download. For shipped DD250s report, its name is "UnattendedShippedDD250s."

9.2 Input Parameters

Using the following self-explanatory parameters, the shipped DD250s data are restricted to a specific date range.

- StartDate --- [Required]
- EndDate --- [Required]

Both date parameters have to be formatted as "MM/DD/YYYY."

9.3 Return

An XML document will be returned and saved to your specified "saveAs" location. Any DD250s shipped within the specified date range will be included in the document returned. This XML document is compatible with MS Excel, version 2002 or greater. If there were no shipped DD250s within the specified date range, the following XML will be returned:

```
<root xmlns:sql="urn:schemas-microsoft-com:xml-sql">
          No Record Found!
</root>
```

9.4 Creating Request XML Document

In order for the un-attended reports download program to perform correctly, it requires an input XML document, which provides details such as the requesting report name, input parameters, and the location to save the downloaded report. The expected input XML document must adhere to the following document type definition (DTD):

```
<!ELEMENT reportsDownload (reports)>
<!ELEMENT reports (report+)>
<!ELEMENT report (parameters, saveAs)>
<!ELEMENT parameters (parameter*)>
<!ELEMENT parameter (#PCDATA)>
<!ELEMENT saveAs (#PCDATA)>
```

Appendix I - VIM-ASAP Data Exporting

```
<!ATTLIST report name CDATA #REQUIRED> <!ATTLIST parameter name CDATA #REQUIRED>
```

As stated in the above DTD, the input XML document has <reportsDownload> element as its root. And this <reportsDownload> root element has a single <reports> child element. Within the <reports> element, it must have one or more <report> elements; where each <report> element stores input data for its corresponding requesting report.

Each <report> element must have a "name" attribute. For shipped DD250s, the report's "name" attribute value shall be "UnattendedShippedDD250s." In addition, a <report> element must contain exactly one element and exactly one <saveAs> element.

Within the <parameters> element, there can be zero or more <parameter> elements. If there are any required parameters listed under "Input Parameters" section above, then there has to be at least that many <parameter> elements. Each <parameter> element must contain a "name" attribute, whose value is one of those listed under the "Input Parameters" section. For shipped DD250s, there will be two <parameter> elements, one for "StartDate" and another for "EndDate".

Lastly, the <saveAs> element holds the path to where the downloaded report will be saved.

Following is an example input XML document requesting shipped DD250:

```
<?xml version="1.0" ?>
<!DOCTYPE reportsDownload
  <!ELEMENT reportsDownload (reports)>
  <!ELEMENT reports (report+)>
  <!ELEMENT report (parameters, saveAs)>
  <!ELEMENT parameters (parameter*)>
  <!ELEMENT parameter (#PCDATA)>
  <!ELEMENT saveAs (#PCDATA)>
  <!ATTLIST report name CDATA #REQUIRED>
  <!ATTLIST parameter name CDATA #REQUIRED>
]>
   <reportsDownload>
     <reports>
         <report name="UnattendedShippedDD250s">
            <parameters>
               <parameter name="StartDate">
                [GetDate(MM/DD/YYYY) - 7]
               </parameter>
               <parameter name="EndDate">
                [GetDate(MM/DD/YYYY)]
               </parameter>
            </parameters>
      <saveAs>c:\Reports\ShippedDD250s\[GetDate(YYMMDD)].xml</saveAs>
         </report>
```

Appendix I – VIM-ASAP Data Exporting

```
</reports>
</reportsDownload>
```

Note the use of GetDate() function; please refer to the un-attended download program's documentation for usage details.

Shipped Requisitions Report

10.0 Overview

Using the un-attended reports download program, which can be downloaded from Vim-Asap Info. site, and an input XML document, you can have information regarding your shipped requisitions downloaded and saved to your local file directory on a scheduled basis and without any user interaction. This document will present the structure of the input XML document and provide you the necessary data, e.g.: report name and input parameters, to create an XML document requesting reports on your shipped requisitions.

10.1 Report Name

The requesting XML document must contain a unique report name identifying which report to download. For shipped requisitions report, its name is "UnattendedShippedReqs."

10.2 Input Parameters

Using the following self-explanatory parameters, the shipped requisitions data are restricted to a specific date range.

- StartDate --- [Required]
- EndDate --- [Required]

Both date parameters have to be formatted as "MM/DD/YYYY."

10.3 Return

An XML document will be returned and saved to your specified "saveAs" location. Any MROs shipped within the specified date range will be included in the document returned. If there were no shipped MROs within the specified date range, the following XML will be returned:

10.4 Creating Request XML Document

In order for the un-attended reports download program to perform correctly, it requires an input XML document, which provides details such as the requesting report name, input parameters, and the location to save the downloaded report. The expected input XML document must adhere to the following document type definition (DTD):

```
<!ELEMENT reportsDownload (reports)>
<!ELEMENT reports (report+)>
<!ELEMENT report (parameters! saveAs)>
<!ELEMENT parameters (parameter*)>
<!ELEMENT parameter (#PCDATA)>
<!ELEMENT saveAs (#PCDATA)>
```

Appendix I - VIM-ASAP Data Exporting

```
<!ATTLIST report name CDATA #REQUIRED> <!ATTLIST parameter name CDATA #REQUIRED>
```

As stated in the above DTD, the input XML document has <reportsDownload> element as its root. And this <reportsDownload> root element has a single <reports> child element. Within the <reports> element, it must have one or more <report> elements; where each <report> element stores input data for its corresponding requesting report.

Within the <parameters> element, there can be zero or more <parameter> elements. If there are any required parameters listed under "Input Parameters" section above, then there has to be at least that many <parameter> elements. Each <parameter> element must contain a "name" attribute, whose value is one of those listed under the "Input Parameters" section. For shipped requisitions, there will be two <parameter> elements, one for "StartDate" and another for "EndDate".

Lastly, the <saveAs> element holds the path to where the downloaded report will be saved.

Following is an example input XML document requesting shipped requisitions:

```
<?xml version="1.0" ?>
<!DOCTYPE reportsDownload
  <!ELEMENT reportsDownload (reports)>
  <!ELEMENT reports (report+)>
  <!ELEMENT report (parameters, saveAs)>
  <!ELEMENT parameters (parameter*)>
  <!ELEMENT parameter (#PCDATA)>
  <!ELEMENT saveAs (#PCDATA)>
  <!ATTLIST report name CDATA #REQUIRED>
  <!ATTLIST parameter name CDATA #REQUIRED>
]>
   <reportsDownload>
     <reports>
      <report name="UnattendedShippedReqs">
        <parameters>
         <parameter name="StartDate">
            [GetDate(MM/DD/YYYY) - 7]
         </parameter>
         <parameter name="EndDate">
            [GetDate(MM/DD/YYYY)]
         </parameter>
         </parameters>
         <saveAs>c:\Reports\ShippedReqs\[GetDate(YYMMDD)].xml</saveAs>
      </report>
      </reports>
```

Appendix I – VIM-ASAP Data Exporting

</reportsDownload>

Note the use of GetDate() function; please refer to the un-attended download program's documentation for usage details.